

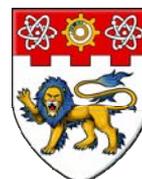


Tokyo Tech-AYSEAS 2016

Tokyo Tech-Asia Young Scientist and Engineer
Advanced Study Program 2016

Final Report

—From Asia to the World—



ACKNOWLEDGEMENTS

Tokyo Tech-AYSEAS (Tokyo Tech-Asia Young Scientist and Engineer Advanced Study Program) Administration Office and all Tokyo Tech-AYSEAS 2016 members would like to thank the following cooperating organizations, companies and universities (listed here in the order we visited and according to other cooperation) for the precious opportunity to visit them in Thailand and for the discussions with students from partner universities in, Thailand, Indonesia, the Philippines, Singapore and Vietnam.

Nippon Steel & Sumitomo Metal Corporation (Kimitsu Works)

Mitsubishi Elevator Asia Co., Ltd.

National Science and Technology Development Agency (NSTDA)

Nissan Motor Asia Pacific Co., Ltd.

Summit Auto Body Industry Co., Ltd.

Akebono Brake (Thailand) Co., Ltd.

UNESCO Bangkok

Betagro Foods Product International Co., Ltd.

King Mongkut's Institute of Technology Ladkrabang

King Mongkut's University of Technology Thonburi

De La Salle University

Universitas Gadjah Mada

Ho Chi Minh City University of Technology

Nanyang Technological University

Special Thanks to **King Mongkut's Institute of Technology Ladkrabang** this year's host university in Thailand.

Special thanks to the **Tokyo Tech Fund** and the **Support Office for Promotion of Global Human Resource Development** for supporting the students' travel expenses.

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About the Program

1. Program Information

A) Outline

Tokyo Institute of Technology (Tokyo Tech) launched the Tokyo Tech-Asia Young Scientist and Engineer Advanced Study Program (Tokyo Tech-AYSEAS) in 2013. It is the successor to the highly successful Japan-Asia Young Scientist and Engineer Study Visit (JAYSES), which was launched in 2007 with the aim of establishing networks of promising young persons in Asia. Tokyo Tech-AYSEAS continues in the spirit of JAYSES while developing as an integral part of the Global Scientists and Engineers Course, of which it recently became a part. Tokyo Tech-AYSEAS provides opportunities for participants to broaden their horizons through collaboration with students from different backgrounds and to experience the dynamism of rapidly growing Asian industry, education and government.

This year, we visited Thailand, and learned from many people working for manufacturers, government organizations, and educational institutions.

Tokyo Tech-AYSEAS 2016's main theme was "From Asia to the World." The program primarily consisted of the three parts outlined below:

1) Preparatory studies

The Tokyo Tech participants had preparatory study sessions to deepen their understanding of the technical visits planned in Thailand.

- Lectures about several topics
- Visit to Nippon Steel & Sumitomo Metal Corporation Kimitsu Works
- Basic Thai language
- Study and presentations (in English) on the institutions to be visited in Thailand
- Discussion sessions to improve oral English

2) Activities in Thailand

a. Technical visits to Japanese and Thai companies, government organizations, universities and UNESCO Bangkok.

b. Group discussions and presentations

At the end of each day, students discussed what they learned at the institutions and exchanged opinions. Based on the discussions, each group

chose one topic and made a presentation on the last day. The topics are below:

- Motorization and traffic jam
- Urbanization and economic discrepancy
- Development of energy resources and protection of environment
- Generation of electricity by nuclear energy and risk assessment for severe accident
- Economic growth and gap between the rich and the poor
- Education and industrial management
- Innovation and regional/global competition
- Technology transfer between countries and the effect on business growth in each country
- Cultural difference and understanding on different culture (Understand others/Let others understand us)

3) Reporting

Tokyo Tech students published the Final Report (this report) and held a final reporting session after their return to Tokyo.

B) Objectives

- 1) To learn how the latest technologies and methodologies are applied on the practical stage in Thailand, and to learn about the support from and control by government organizations.
- 2) To experience collaboration with students from different nationalities, cultures, languages, viewpoints or fields of study.
- 3) To brush up on their English skills as a tool for international communication.
- 4) To develop close and international friendships.

C) Participating Universities

Japan	Tokyo Institute of Technology (Tokyo Tech)
Thailand	King Mongkut's Institute of Technology Ladkrabang(KMITL): Host university of Tokyo Tech-AYSEAS2016 King Mongkut's University of Technology Thonburi(KMUTT)
The Philippines	De La Salle University(DLSU)
Indonesia	Universitas Gadjah Mada(UGM)
Vietnam	Ho Chi Minh City University of Technology(HCMUT)
Singapore	Nanyang Technological University(NTU)

D) Benefits for the participants

- 1) Participants can develop an international human network.
- 2) Participants can learn the latest technologies in Indonesian industry and about the relationships between ASEAN countries and Japan through private investment or Official Development Assistance (ODA).
- 3) Participants receive certificates issued by an Executive Vice President of Tokyo Tech.
- 4) Participants can collect useful information about studying at Tokyo Tech.
- 5) Participants can improve their English skills.

E) Expected Results

- 1) More Japanese students will study abroad
- 2) More ASEAN students will study in Japan
- 3) Build a strong, international student network between top-ranking universities in ASEAN countries and Japan

2. Schedule of Tokyo Tech-AYSEAS 2016

April–May 2016	Announcement and application
May–June	Selection
June–July	Preparatory studies
August 22–September 1	Activities in Thailand
November 9	Final presentation session at Tokyo Tech

Schedule of Preparatory studies

Date	Theme
June 14	Orientation, Lecture by Prof. Hanamura
June 21	Lecture by Prof. Hayashi
June 28	Lecture by Prof. Nakashima
July 5	Lecture by Prof. Fujisawa
July 12	Visit to Nippon Steel & Sumitomo Metal Corporation (Kimitsu Works)
July 19	Lecture on Thailand and Thai lesson by Thai students
July 26	Pre-trip presentation

Schedule of Activities in Thailand

Date	Event
August 22	Participants arrive in Thailand
August 23	Opening ceremony at KMITL
	Mitsubishi Elevator Asia Co., Ltd.
	Ice Breaking Session
August 24	National Science and Technology Development Agency (NSTDA)
	Nissan Motor Asia Pacific Co., Ltd.
August 25	Summit Auto Body Industry Co., Ltd.
	Akebono Brake (Thailand) Co., Ltd.
August 26	UNESCO Bangkok
	Tokyo Tech Seminar at KMITL (Information about study abroad to Tokyo Tech)
August 27	Grand Palace, Wat Phra Kaeo, Wat Pho, Wat Arun
August 28	Ayutthaya
August 29	Betagro Foods Product International Co., Ltd.
August 30	Preparation for presentation and Cultural Exchange Party
August 31	Final Presentation and Closing ceremony
September 1	Tokyo Tech Students arrive in Tokyo

3. Selection

A) Tokyo Tech students

1) Announcement at Tokyo Tech

The Tokyo Tech-AYSEAS administration office announced the program through its website, posters and flyers in April. They had briefing sessions on several occasions including the Study Abroad Fair and English events on campus.

2) Application

Applicants submitted an essay with their application titled “What is your purpose and expectations for joining Tokyo Tech-AYSEAS?” within 500 words in English by 23 May 2016. The number of applications this year was 11.

Statistic of application (by nationality and gender)

Nationality	Female	Male	Total
Japan	3	8	11
Total	3	8	11

Statistic of application (by grade, school and gender)

Years of Study	Grade	Female	Male	Total
Undergraduate	B1	0	0	0
	B2	0	0	0
	B3	3	4	7
	B4	0	3	3
Total of Undergraduates		3	7	10
Graduate	M1	0	1	1
	M2	0	0	0
Total of Graduates		0	1	1
Grand Total		3	8	11

3) Interviews

Tokyo Tech-AYSEAS panel meeting members interviewed the applicants in May and June. The applicants were divided into three groups of 3-5 persons. They were asked to have a discussion for 20 minutes and to give a presentation about their conclusions.

The topic was as follows.

“Artificial Intelligence (AI) is developing rapidly in recent years. We have seen AI beat masters of games including Shogi (Japanese chess) and Google and other companies have developed self-driving cars, showing that many tasks can be done by computers as well as or even better than human beings.

Additionally, some researchers have suggested that up to 50% of human jobs could be replaced by AI in the future. In other words, many people will lose their jobs.

Discuss the following:

How should AI be used to benefit people in developing and developed countries?”

4) Criteria for Selection

The essays were scored based on the applicant's English ability, logical composition, and eagerness. In group discussions, applicants were appraised by assertiveness, cooperativeness, logicity, calmness, and attitude by Tokyo Tech-AYSEAS panel meeting members.

B) Students from partner universities

Students from partner universities sent their applications to Tokyo Tech. There were 40 applications from ten universities this year. The applications were sent for selection to the applicants' home universities, and 20 students participated in the program.

The certificates signed by the Executive Vice President of Tokyo Tech were given to the participants.

Statistic of application (by country and gender)

Country	Female	Male	Total
Thailand	4	13	17
The Philippines	0	1	1
Indonesia	5	4	9
Vietnam	3	1	4
Singapore	6	3	9
Total	18	22	40

Preparatory Studies in Japan

Outline

Before departure, Japanese participants attended to three kinds of preparatory sessions: lectures by professors and Thai student in Tokyo Tech, discussion sessions and factory visit.

1. Lecture

The lectures we attended are listed below.

- June 14 Energy issues for sustainable community (Prof. Katsunori Hanamura)
- June 21 Biological assessments of your developing technology as a special field of the supposed person you are visiting (Prof. Nobuhiro Hayashi)
- June 28 Technology and Technics for Sports (Prof. Motomu Nakashima)
- July 5 Electromagnetic waves in materials (Prof. Toshimasa Fujisawa)

We had a final presentation to share the information about the organizations that we would visit in Thailand. Divided into groups of 2 students, each group presented about NSTDA, KMITL, Summit Auto Body, UNESCO Bangkok, and Japanese companies (Mitsubishi Elevator, Akebono Brake, Nissan).

2. Discussion

Before summer break, we gathered at lunch time (12:30–13:00) on weekdays when we could gather in addition to “Think Aloud!”, and held discussion sessions on our own in order to practice English discussion and conversation. We held this session inviting the exchange students and Japanese students who will go to Thailand with a different program. A selection of discussion topics is as below, and we referenced them from the topics of past Think Aloud.

Nations

Facebook & Facial Recognition

Anime and Live-action Remakes

Performance Enhancement (Doping)

etc.

3. Factory Visit

We visited a Japanese company, Nippon Steel & Sumitomo Metal Corporation on July 12.

Edited by Yumi

NIPPON STEEL & SUMITOMO METAL CORPORATION (KIMITSU WORKS)

Reporter: Yumi Iida (Yumi)

Date & Time: 15:00–17:00, July 12, 2016

Program: Presentation about company, factory tour and Q&A session

Contents of visit and Reporter's comment:

1. Presentation about company

Nippon Steel & Sumitomo Metal Corporation (NSSMC) is a company that manufactures various kinds of steel products. Kimitsu Works was established in 1965, and not only makes steel products but also recycles the used plastic. We viewed the display about steel and its product in the communication hall and watched a video about Kimitsu Works.

2. Factory tour

After the presentation, we had a factory tour and saw the rolling process of the steel and plastic recycle factory. At first, we moved to the rolling mill by bus and viewed the way of steel becoming hot-rolled steel sheet. We could feel the hotness of highly-heated slab. The slab was rolled repeatedly and cooled by large amount of water. The steel sheet was finally rolled up like toilet paper and delivered to another factory to add more process. Next we visited the plastic recycling equipment. At the equipment, we viewed the way of separating plastics from other material like metals. The plastic was formed into pellets and they were made into new plastic products. While we were moving by bus, we saw a forest made by NSSMC's employees. They have made the forest for a long time by planting trees one by one. NSSMC focused on recycling resources, for example scrap of steel and water and energy, and we could feel that it makes the efficiency of energy in Japanese steel industry the highest level.

Q&A:

Q1: The strength and thickness of steel depend on customer's demands, how to control them?

A1: We control the temperature of steel, the cooling velocity and the number of rolling by computer control.

Q2: Why does NSSMC make two kinds of pipes, UO pipes and spiral pipes?

A2: The weld length and the power to bend steel are different between these pipes, so we use properly depending on the purpose.



Group photo

Lecture on Thai Language and Culture

Reporter: Yumi Iida (Yumi)

Date & Time: 16:50-18:20, July 19, 2016

Program: Introduction of Indonesian language and culture

Summary and Reporter's Comment

As a final lecture before we went to Thailand, we welcomed a Thai international student and he gave us an interesting and useful presentation. In addition to Thai language, he taught us the overview of Thailand, Culture & foods in each region, and what we should do or do not in Thailand. I thought that Thailand was always summer, but I learned that Thailand has 3 seasons, summer and rainy and winter. His presentation was full of important information, I took the copy of his presentation to Thailand and I often checked it. Especially, Thai words are difficult to read even if it is written in alphabet, for example "Hello" is "Sawatdee krub/ Sawatdee kha" in Thai, but he taught how to pronounce all of common words & phrases, we could understand and use in Thailand. And he taught us that we have to dress properly when we visit in a temple, it was very helpful for us. We didn't know we shouldn't wear short skirt or short pants in a temple. We might wear them if he didn't tell us because Thailand is very hot. And he also told us that we might be able to ride on an elephant, it made us exciting, so we were very happy when we could ride on elephant in Thailand.

When we took his presentation at first, we were not familiar with the Thai culture & foods, and large part of them were the first time for us to see. But now, we experienced various Thai foods and went to many famous places, so I long for Thailand when I see the pictures in his presentation. We want to talk about Thailand with him again. Thank you very much, Mek Srilomsak.



Thai cultures



Typical Thai dishes

Edited by Yumi

Technical Visits

Outline

Technical visits are the main activities of AYSEAS. We visited seven organizations listed below, and there we gained a lot of information and knowledge.

These experiences helped us to see and know the current situation in Thailand and its relationships with the world, especially Japan. At the same time, it was a great opportunity for us students in science and engineering to think about the technology in terms of globalization. For example, we witnessed many machines from Japan during factory tours, and it helped us know more about technology transfer.

Mostly the visits were divided into three parts as follows; presentation about the company or institution, factory/campus tour, and Q&A session. Each of us had different interests in each company or institution. This allowed us to obtain not only the information of the organization but also understandings from various viewpoints.

Detailed reports on each technical visit are on the following pages in the same order as the schedule below.

Schedule

August 23 (Tue)	Mitsubishi Elevator Asia Co., Ltd.
August 24 (Wed)	National Science and Technology Development Agency (NSTDA) Nissan Motor Asia Pacific Co., Ltd.
August 25 (Thu)	Summit Auto Body Industry Co., Ltd. Akebono Brake (Thailand) Co., Ltd.
August 26 (Fri)	UNESCO Bangkok
August 29 (Mon)	Betagro Foods Production International Co., Ltd. (BFI)

Edited by Takashi

King Mongkut's Institute of Technology Ladkrabang (KMITL)

Reporter: Sho Iwata (Sho)

Program: Opening ceremony, Campus tour, Final Presentation, Farewell party

Contents of visiting and Reporter's comment:

KMITL is a leading research and educational university at Bangkok in Thailand. It was founded as telecommunications training center in 1960 and renamed KMITL in 1971. There are 8 faculties and a college in KMITL: Engineering, Architecture, Industrial education, Science, Agriculture, Information technology, Agroindustry, International college.

In the opening ceremony, Japanese student's leaders made a presentation about AYSEAS program. All students got along soon after this ceremony I think.

A campus tour was held after the opening ceremony. We went to the roof floor of the building in which the opening ceremony was held in and we could see airplanes nearby. We had lunch at a canteen and saw how student's lunch is in Thailand.

The final presentation was also held in KMITL. Each group gave a great presentation. And professors gave us comments on the presentations. The presentation and discussions for the presentations became wonderful experience for us.

The farewell party was in the same floor of the presentation's room. The president of KMITL made a speech and we enjoyed dinner with conversation. The most memorable thing in this party was Thai dance. KMITL students who didn't participate in this program did a dance with performance of Thai musical instruments. After a while, we all danced together and enjoyed so joyful time.



Fig.1 Opening Ceremony



Fig.2 Farewell party

Mitsubishi Elevator Asia Co., Ltd.

Reporter: Kuribayashi Junpei (Junpei)

Date & Times: 14:00~16:00, August 23, 2016

Programs: Presentation about company, factory tour, Q&A session

Contents of visiting and Reporter's comment:

1. Presentation about company

Mitsubishi Elevator Asia Co., Ltd. was established in 1991. It's located in Amata Nakorn Industrial Estate, which is in Chon Buri prefecture. This company has about 1700 employees and most of them are Thai people. They provide elevators and escalators. They can make very fast elevators (1080 m/min). Moreover, it was recently announced that they made a new elevator which is the fastest in the world, 1230 m/min. But it has was not introduced. And, they have technology reducing vibration and noise. Mitsubishi Elevator Asia Co., Ltd. introduces various escalators (Spiral Escalator, Space-saving Escalator and so on). These escalators guarantee safety, comfortable and useful.

2. Factory tour

We were divided into three teams and walked around the company. There were a lot of automatic machines and workers. Compared with other companies which we visited, the number of workers was more. Moreover, we saw not only the manufacturing process but also the staff canteen and the play-ground to play soccer and sepak takraw.



Fig.1 Q&A session



Fig.2 Group photo

Q&A:

Q1: Is a very fast elevator in demand in the elevator market?

A1: In Asia, it's not and the elevator which can move at a moderate speed is in demand. But, the number of tower buildings in Asia are increasing. That's why we are developing very fast elevator.

Q2: What do Japanese workers do in this company?

A2: They are managers. They also negotiate about labor environment and salary with Thai workers.

National Science and Technology Development Agency (NSTDA)

Reporter: Ohta Tetsuro (Tetsuro)

Date & Time: 9:30~11:30, August 24, 2016

Program: Lecture about application for mobile phone, presentation of MTEC and video of BIOTEC

Contents of Visit and Reporter's Comment:

NSTDA is placed in Thailand Science Park. It is a research institute and eager to collaborate with companies.

In Thailand, traffic jam is often a problem. NECTEC, which is a department of electronics and computers, developed an application called "SAFEMATE" for smartphone to help to solve this problem. Drivers' driving skill is evaluated by SAFEMATE, which uses sensors in smartphone like GPS, gyro and so on, and alerted. The developer explained about a process of selection of device and how to evaluate.



MTEC is a department of Metal and Materials. When I watched a presentation by MTEC staff, I had an impression to evaluate quality rather than to develop new materials, because there are a lot of assessments like stress and thermal.



BIOTEC is a department of Genetics and Biotechnology. This center has several programs namely Health and Medicine, Agriculture and Food, Energy and Environment and Bioresource Conservation and Utilization.



Fig.1 Q&A photo



Fig.2 group photo

Q&A:

Q(BIOTEC): How does BIOTEC assess the effects of medicine developed for humans?

A: In Thailand, experiment for human is illegal. So, BIOTEC depends on overseas investigation.

Nissan Motor Asia Pacific Co., Ltd.

Reporter: Yuto Kumazawa (Kuma)

Date & Time: 14:00~ 17:30, August 24, 2016

Program: Presentation about company, factory tour, Q&A session

Contents of visit and Reporter's comment:

1. Presentation about company

We watched a video about Nissan. They talked about the company, products and the factory with presentation. There are many Nissan companies in Thailand. We heard about the organization of Nissan in Thailand.

2. Factory tour

We walked around the factory. We saw employees combine many parts. A lot of machines worked there. All parts were managed by a computer system. So employees cannot fail to combine any parts. They have many experiment stations. For example, anechoic chamber, a room for durability evaluation test on the rough road, a room to measure the sound and so on. We had an experience that we rode in the experiment car in the room for durability evaluation test on the rough road. Finally the car that we rode in moved onto the experiment road. And, we took a commemorative photo.



Fig.1 Group Photo

Q&A:

Q1: Does Nissan buy any parts of the car from companies in Thailand?

A1: Yes. We buy body parts, because it is cheap.

Q2: Why did you make factories in Thailand?

A2: Because labor cost in Thailand is cheaper than in Japan, and this place is suitable for export.

Summit Auto Body Industry Co., Ltd.

Reporter: Maya Okihara (Maya)

Date & Time: 9:00 ~ 11:00, August 25, 2016

Program: Presentation about company, factory tour and Q&A session

Contents of Visit and Reporter's Comment:

1. Presentation about company

Summit Auto Body Industry Co., Ltd. (SAB) is a company that manufactures various kinds of automobile body parts. It was established in 1986 by Mr.Sunsum Jurangkool, who established Summit group in 1972 under the name Summit Auto Seats Industry Co., Ltd.. Summit group has mainly 4 parts of the business: automobile parts industry, golf courses, hotels and other business.

2. Factory tour

After a presentation, we had a factory tour and saw the process of making parts of cars. Firstly we visited the design department, which discusses the design of products with customers while working out a design. They said that they worked in 4 member group per 1 product. Secondly we visited a department which is located next to the production site and processes data such as CAD data. In the department they have a training system for new workers who have not used software such as CAD. Finally we moved on to the production site. There, we saw machines casting parts of cars, and workers putting pre-cast parts of cars and taking casts of parts of cars. SAB staff explained that they could reduce the number of workers by introducing these machines.



Fig.1 Q&A photo



Fig.2 group photo

Q&A:

Q1: In the factory it seemed that the percentage of male workers was larger than that of female, is there a difference between men and women when they are employed?

A1: We employ persons of ability and assign person proper job according to their skill.

Q2: Why does your company not make your own company's car?

A2: Because we have a connection with carmakers such as TOYOTA and SUZUKI, and if we make own cars then we will not be able to cooperate with them.

Q3: Why does Summit group not only have a cars parts business but also hotel business?

A3: Because it is a beneficial source of foreign exchange.

Akebono Brake (Thailand) Co., Ltd. <AKBT>

Reporter: Nishiyama Junji (Junji)

Date & Time: 13:00~ 15:00, August 25, 2016

Program: Presentation of general information about AKBT and factory tour, Q&A session.

Contents of Visit and Reporter's Comment:

First of all, we listened to a presentation about Akebono Brake (Thailand) Co., Ltd. <AKBT>. We heard the company's overview and that AKBT manufactures Disk Brakes for cars (pads, calipers and so on) and sells to other companies (TOYOTA, HONDA, GM and so on in Thailand). (Fig. 1) Moreover, we were given an explanation about calipers. Calipers which are one of the most important parts in Disk Brakes move like a piston and press the two pads.

After this we went into the factory. We could see manufacturing process of Disk Brakes there. We were mainly shown calipers, pads and quality control. We saw that calipers are manufactured for each company and the materials of pads are mixed and sintered. In each of the processes, they were efficiently manufacturing by controlling production line and quantity of production. Moreover, People who are in charge of quality control were knocking and listening to the sound so that they can detect defects.

Finally, we took a photo at the entrance. (Fig. 2)

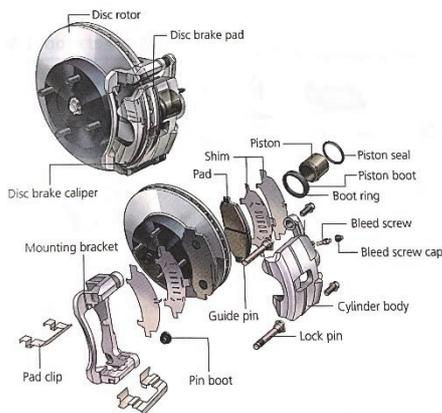


Fig. 1 Main Components of Disk Brakes



Fig. 2 Photo after factory tour

Q&A:

Q1: Why is there a groove on brake?

A1: To prevent noise and remove abrasion powder.

Q2: I think it is difficult to sinter materials of pads to prevent cracks. How do you sinter them?

A2: We control time and temperature superbly. It is a company secret.

UNESCO Bangkok

Reporter: Hiroki Kanda (Hiroki)

Date & Time: 9:30~11:00, August 26, 2016

Program: presentation of general information about UNESCO, introduction of students
Q&A session with President Kim, Q&A session with staffs

Contents of Visit and Reporter's Comment:

1. Presentation about UNESCO

Since UNESCO was established in 1945 after the conference of Allied ministers of education in 1942, UNESCO works for “Building of Peace”, “Alleviation of Poverty”, “Sustainable Development” and “Intercultural Dialogue”. Its five main programs are “education”, “natural science”, “social and human science”, “communication and information” and “culture”. UNESCO Bangkok Office is responsible for all UNESCO activities at the regional level in the “Mekong” countries. Another role of UNESCO Bangkok is the Asia-Pacific Regional Bureau for Education.



Fig.1 Q&A photo



Fig.2 group photo

Q&A:

Q1: First of all, what made UNESCO Bangkok Office choose Tokyo Tech as a collaborative partner?

A1: Because Tokyo Tech is a leading institution in technological field in Asia. And Japan supports UNESCO Bangkok's activities not only financially but also non-financially. In addition, Kobe University and Tokyo University are UNESCO Bangkok's collaborative partner.

Q2: In UNESCO Bangkok's areas, which is more important, agriculture or aquaculture?

A1: Both of them are important. However, ones of the STGs (Sustainable Development Goals) is “clean water and sanitation”, so aquaculture should be considered carefully.

Q3: What does UNESCO Bangkok do to solve traffic jams?

A3: Traffic jam is not our field because traffic jam is a metropolitan problem and our field is outside of urban area. But it is important to solve traffic jam because it isn't a local issue.

Q4: How does UNESCO Bangkok do in education for disabled people?

A4: We use assistive technology such as AI. In addition, digital devices such as tablets are useful for education of migrant children. It is important to reduce the digital gap.

Betagro Foods Product International (BFI)

Reporter: Sho Iwata (Sho)
Date & Time: 10:00~12:00, August 29, 2016
Program: Factory tour, Q&A session, Lunch

Contents of Visit and Reporter's Comment:

Betagro Foods Product International Company Limited is based in Bangkok, Thailand. The company produces roast, steamed and fried chicken and related products. It operates as a joint venture between Mitsubishi Corporation and Betagro Group.

We heard the introduction of the company at the beginning.

Next we visited the factory. We could see many workers and machines in the factory. Workers put on a uniform of some colors which showed their roles; sorting meals, cooking meals, cleaning floor, checking workers.

After the tour, we had a question time and there were many questions. For example, there was a question that was “sometimes do some human errors happen because there are many workers in the factory and they have to deal with much meal?” The answer was that “they have enough training and leaders always check workers and their works”. Another was “for the safety, do you have some special treatment with water?”. The answer to it was “Yes, we have machines to clean up water”

We had lunch there, which was products of BFI. There were Thai foods such as Tom yum goong but also there were meals that we can see in Japan; Yakitori, Tempura and so on. They tasted the same in Japan. It was absolutely right because these meals are exported to Japan!



Fig.1 Q&A photo



Fig.2 group photo

Discussion and Presentation

Outline

We visited seven companies and organizations. In order to share what we learned from them and pursue deep understanding of current topics in ASEAN countries, we had a discussion and presentation at KMITL. We were divided into 5 groups and each group decided their own discussion topics that were provided by professors. Each day we had a discussion and preparation for the final presentation. In the final presentation, each group had 20 minutes for presentation and 10 minutes for questions. Here is the schedule and brief introduction of each group.

Schedule and Discussion Topics

August 23 (Tue) Mitsubishi Elevator, Meeting
August 24 (Wed) NSTDA, Nissan, Meeting
August 25 (Thu) Summit, Akebono Brake, Meeting
August 26 (Fri) UNESCO, Meeting
August 29 (Mon) BFI, Meeting
August 30 (Tue) Preparation for presentation
August 31 (wed) Preparation for presentation, Final presentation

Group1 “Motorization and traffic jam”

Member: Yumi, Hiroki, Nick, Poom, Gno, Huimin

Group2 “Technology transfer and economic growth”

Member: Ichitaro, Kuma, Park, Zoda, Galih, Hibran

Group3 “Generation of Electricity by Nuclear Energy and Risk Assessment for Severe Accident”

Member: Tetsuro, Junpei, Copy, Damith, Dream, Jie Min

Group4 “Motorization and Traffic Jam”

Member: Maya, Junji, Surith, Yai Bua, Raymond, Edel

Group5 “Development of energy resources and protection of environment”

Member: Takashi, Sho, Puji, Tomtam, Brescia, Shermeen

Edited by Takashi

Group 1: Motorization and traffic jam
Members: Yumi, Hiroki, Nick, Poom, Gno, Huimin

1. Introduction

First of all, 4 members of Group 1 are students of mechanical engineering or automobile engineering, and 3 of the 7 factories which we visited are factories which produce automobiles or parts of automobiles. For us, in view of study and development of Thailand, motorization or manufacturing automobiles is important.

In addition, during AYSEAS programs, we suffered from delay of schedule because of traffic jam. We were always behind schedule during AYSEAS program. So it was not difficult for us to guess that solving traffic jam was important in Thailand.

For these reasons, we selected the topic “motorization and traffic jam.”

2. Overview of Thailand

According to TomTom Traffic Index, Bangkok is the 2nd most congested city in the world, so traffic moves 57% slower on average and 114% slower at evening peak. In the other hand, automobile industry is important for Thailand. Approximately 12% of Thailand’s GDP is the automobile industry and transport goods accounts for 11% of total export of Thailand.

Several reasons cause Thailand’s motorization and traffic jam. The 1st one is government. From 2011 to 2014, the Thai government tried to increase the car sales by having some campaign called first car campaign (discount for new buyers, up to 100,000 THB), and the Thai government has no policy vehicle rising rate. The 2nd one is public transportation. For example, lack of other comfort transportation categories in some area, (Sky train **BTS**, subway **MRT**) and bad public transportation. (Time attendance, car condition, drivers, ...)

Thailand tried to solve traffic jam, especially in Bangkok. For example, constructing more sky trains in some overcrowded areas and putting traffic checkpoint or more traffic lights.

3. Solution

Participants of Group 1 are from Thailand, Japan and Singapore. So we referenced what Singapore and Japan did to solve traffic jam. After we discussed Singaporean and Japanese solutions and whether they were useful in Thailand, we suggested our solutions.

3.1 From AYSEAS Trip

We referenced what we learned during AYSEAS2016.

Firstly, from visiting NSTDA, traffic accident, one of the causes of traffic jam, are caused by human, road and vehicles, and NSTDA tries to create smartphone’s application to prevent traffic accidents.

Secondly, from visiting automobile factories, we learned every factory try to promote localization.

Third, on weekend trip, we had to wait for a lot of time to buy train tickets, it was so irritating.

3.2 Japanese solution

We referenced finding bottlenecks of traffic flow and getting rid of them, and prohibiting on-street parking as Japanese solutions. Both of them were effective in Japan, but we don't think they are useful for Thailand because the former solution's cost was too high in comparison with loss of traffic jam in Thailand, the latter solutions can damage motorization.

3.3 Singaporean solution

Singapore adopted electronic road pricing, or pay-as you-use principal. In Singapore, drivers must pay high cost for entering central business district areas during peak hours. It can manage demand of roads, makes car trips convenient. It proved its effectiveness in Singapore, and we thought it was a kind of useful in Thailand.

3.4 Our suggestion

As mentioned above, we referenced Japanese and Singaporean solutions. And considering what we learned from AYSEAS trip, we thought human was easiest to change, we shouldn't damage Thailand motorization seriously and we should promote public transportation especially railroads. And we discussed other solutions for example changing office hour and we suggested the two solutions below.

The 1st one is to make the combined cards, like PASMO and Suica. In Japan, those who have these combined cards can use almost all kinds of trains and buses. In Thailand, however, we have to possess many cards because each train requires each card. So we thought removing this inconvenience by making combined card can promote the use of public transportation, and it can control increasing demand of cars. The 2nd one is to make the test of driver license more difficult to improve the driver's skills. We learned the biggest cause of traffic accident is caused by human at NTSDA, and Thai students who have driver license say that the test of driver license was very easy compared with Japan and Singapore and it takes only one day. Reducing the traffic accident can contribute to reducing the traffic jam, so we thought it is efficient to solve it.

4. Conclusion

From this discussion, we concluded that improving the public transport with low charge and making more highway are the top priorities, and other solutions like combined cards, application and automatic driving vehicle are also effective. All of them are associated with technology, so thinking how to apply technology to solving these problems is required to our engineers now and in the future.



Group members

Edited by Hiroki, Yumi

Group 2: Technology transfer and economic growth

Members: Ichitaro, Kuma, Park, Zoda, Galih, Hibran

Contents:

1. Introduction

There is a technology gap between developed country and developing country. Recently, technology transfer occurred between the countries. What is technology transfer? It is the transferring movement of technology, knowledge and skills between organizations. And it is now occurring because technology transfer can contribute co-benefits to both higher technology sources and lower technology sources.

And it effects to the economic growth at the two points, more local competition and bigger market worldwide.

2. Discussion

We discussed the current situation of technology transfer. Technology transfer has a big problem. Local industry of developing country might become inactive to initiate and develop the new technology. Developing country might be facing with short of economic growth due to less competition of business and jobs. For example, Summit Auto Body (SAB), which is a Thailand company now imports 100% of technologies which are used in their factory from Japanese companies. So SAB can't develop their own technologies without Japanese technicians. As a result, Summit group (parent company of SAB) have to expand their business to earn more money.

3. Our suggestion

To improve the current situation, we suggested a solution. It is that "collaborating countries should launch a regulation to enhance the local industry by assisting the market development of advanced companies". And we made some concrete solution and classified to the 3 groups for the difference of responsibility.

We have two ideas whose responsibility is in "advanced country". The first idea is Technical school. International company establishes a technical school in developing country. Through the school, local people get the chance to learn about the technology. Then, advancing human resources and technology transfer is achieved. At the same time, Technical school makes it possible to get easier way to educate and hire necessary expert technicians. It enhances the company efficiency. From two effects, business growth is achieved. The second idea is CSR-like program. Now, CSR programs are randomly done. So we suggest to focus on CSR program depend on company business. If the international technology company focus to support the

development of related local technology industry, both sides can get benefits. International companies help the related local industry to meet the international standard. As the result, advancing local industry and technology transfer is achieved. At the same time, companies make an agreement that the local industry has to fulfill international company needs. Then, international company gets the lower price of supporting parts with international standard from local industry.

And we have an idea whose responsibility is in both countries equally. That is “co-operation product”. Now there are advanced technologies in international company and local industry in local market. Then we suggest cooperating to invent collaborated product. With the cooperation, both companies can get a bigger market and benefit from selling products, and the local company also can get technologies as the technology transfer.

Finally, we have an idea whose responsibility is in “developing country”. The idea is construction of center of invention. First, both governments of developing and developed countries make agreement. Then they establish an education center in developing country. Professionals from both countries will give lectures to local researchers and it will be a kind of technology transfer. In exchange for that, local researchers have to invent some new products. And after making agreements about the market share and patent of the product between two governments, both countries can get the benefits of selling products.

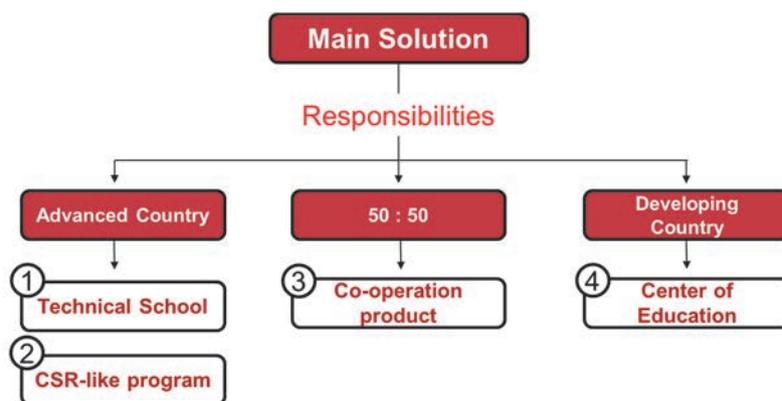


Fig.1 Our idea map

4. Conclusion

We can achieve both Technology transfer and economic growth from our solution that “collaborating countries should launch a regulation to enhance the local industry by assisting the market development of advanced company”. And this idea will be realized from four solutions we wrote above.

Edited by Kuma and Ichitaro

Group 3: Generation of Electricity by Nuclear Energy and Risk Assessment for Severe Accident

Members: Tetsuro, Junpei, Copy, Damith, Dream, Jie Min

Contents:

1. Introduction

In Japan, Fukushima Nuclear plant accident happened in March 11, 2011. Then, the number of plants which are running decreased, and energy shortage is often a problem. And in Thailand, Thai people have the problem to use electricity too much because of very hot conditions every summer.

Nuclear power can compensate for the lack of energy, but there is a risk for severe accident like Fukushima. Therefore, our group tackled this problem.

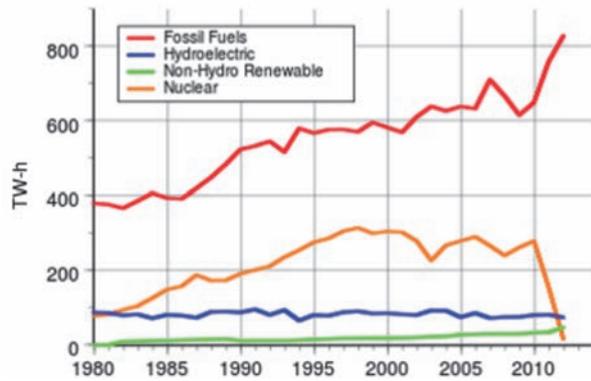


Fig.1 Electricity Production in Japan

2. Severe Accident

The definition of accident is an incident that results in damage or injury. An accident is considered serious if there is widespread damage to property or injury and loss of life.

The risks are property damage, injury and loss of life and environment damage.

- Property damage: destruction of building and the evacuation from the surrounding area.
- Injury and loss of life: influence of radiation.
- Environmental damage: death and extinction of wild life and permanent upset of ecosystem.

3. Benefits and Risks to use nuclear power plant

- Benefits: Very efficient (92% energy efficiency), No emissions, Cheap (E.g. Japan depends on import fuels) and much generation.

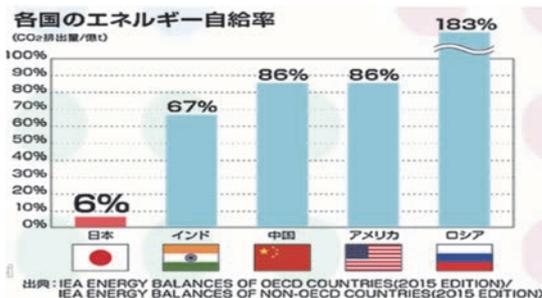


Figure 2 Energy self-sufficiency

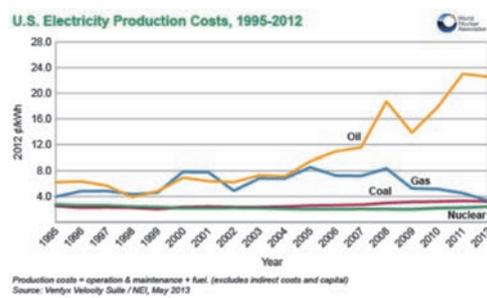


Figure 3 Electricity Production Costs

• Risks: Accidents due to natural disasters (E.g. Fukushima) and human errors (E.g. Chernobyl), political unrest, proximity problem, space constraints (E.g. Singapore and Sri Lanka) and problem of waste products.



Fig.4 East Asia Map



Fig.5 Chernobyl Meltdown

4. Our Suggestion

- a) Introduce alternative clean power sources
Renewable energy: solar, hydro, wind, geothermal, etc...
- b) Reduce energy consumption
Government support for power-saving practice
- c) Alternative fuel sources
E.g. burning trash in Singapore
- d) Research and Development
Improving energy efficiency of electronics

5. Conclusion

We shouldn't use nuclear power because benefits aren't worth the risks, unreliable and unsafe due to potentially unpredictable natural and non-natural disasters.

Nuclear power would be beneficial to us if it can be guaranteed to be 100% safe, but no operation can have zero risk.

Edited by Tetsuro

Group 4: Motorization and Traffic Jam
Members: Maya, Junji, Surith, Yai Bua, Raymond, Edel

Contents:

1. Introduction

Motorization is defined as follows: to equip with a motor vehicle/automobiles. People buy cars for quick and easier transportation. Recently, motorization has advanced in Asian countries, in developing countries. The higher percentage of motorization, the more vehicles there are on the streets. This means vehicle congestion occurs more easily. Moreover, it causes the environmental problems like air pollution. In Bangkok, we face the same situation. Therefore, we focused on Bangkok, where it is known for the heaviest traffic congestion in the world, and discussed solution.

2. Discussion

We talked about 3 points to lead to solution of traffic jam.

Firstly, we related motorization and traffic jam. Motorization provides us with a lot of benefits, which are the convenience of getting to places easily and improved efficiency, this have led to increase in use of automobiles over this year. However, traffic jam is a very critical problem that we face nowadays. It is occurred by poor infrastructure, peak hour traffic and so on. Furthermore, these influence time, efficiency, economy, environment, and so on.

Secondly, we talked focusing mainly on Bangkok because we were studying and touring in Thailand and there are many traffic problems among the rapid motorization in Thailand. As the city continues to expand in Bangkok, coupled with the increase in population, this would only make matter worse as the infrastructure would be unable to accommodate the amount of vehicles on the road. On top of that, the Public Transport is really scarce. The BTS and MRT is insufficient as it does not reach many places within the city. As such, many people may still find it hard to get from a place to another with public transport. This is the main reason why people still have to rely on personal modes of transport. The amount of private cars on the roads is 57% in all of vehicles.

Thirdly, we discussed costs of traffic jam. Even in these 4 developed countries (Britain, France, Germany, America) traffic jam have totaled to 200 billion in 2013. There are also a lot of effects environment. 8.7 billion pounds are the minimum annual cost of poor air quality and greenhouse gas emission. Traffic jams caused 15% of global CO2 emissions in the transport sector.

3. Our suggestion

We suggested 5 solutions, which are Infrastructure, Public Transport, Government Taxing, Controlling the Movement of Traffic and Car Technologies to improve current situation.

a. Infrastructure

We suggested infrastructure technologies to prevent ‘usual’ traffic jam and ‘sudden’ traffic jam. The former is peak hour traffic and so on. We suggested introducing roundabouts, increasing trains and subway, increasing roads for the destination and constructing highway and bypass. In roundabouts, cars need not stop, crossing points decrease. Moreover, ‘Park and Ride system’ is able to be introduced by increasing railway and road and combining them. The latter is traffic accidents, impact of disasters such as flood in Thailand. We suggested introducing traffic light by various system such as real time information, sensor and computer control and enhancing building. However, it costs too much money to solve infrastructure completely. Therefore, ASEAN and Japan must consider how to cooperate in economy and technologies with each other.

b. Public Transport

By having a more reliable and effective public transport, more commuters would be able to take the public transport, which means there will be less cars on the road and thus an increase efficiency. In Singapore they have an effective public transport network system, which is connected to almost every part of the island. Furthermore, a new initiative has been put in place by the Land Transport Authority to further improve the efficiency of public transport. As public transport can get really congested during peak hours as well, free early morning rides have been given to 18 designated MRT stations within the Central Business District area when commuters alight from the station before 7.45am. This gives an additional incentive for commuters to get to work earlier to avoid the rush hour crowd. In Japan, they have a very effective railway system with 3 main types of trains. Namely the normal local train, rapid train and special express train. How this system works is that the rapid and special express trains would not stop at every single station, and only stop at the major train stations where more commuters board and alight from each day. This enables commuters to have various permutation of getting to work.

c. Government Taxing

In terms of solving traffic congestion, a government can tax motor vehicles in highly congested areas like major cities to discourage people in buying automobiles and encourage public transportation. In other words, reduce tax for motor vehicles in little traffic areas to encourage motorization. We introduced the Electronic Road Pricing system (ERP) which is implemented in Singapore. ERP works by toll booths automatically scanning cash cards which are required in every vehicle on specific areas, and price rates change according to busy time period with the highest during rush hour. The positive point is government will attain more money to spend on public transportation and infrastructure, but also we should note that this will cause huge congestion in public transportation.

d. Control the Movement of Traffic

We suggested two solutions about controlling the movement of traffic. The first solution is different start of time for work. Using car for commuting is one of the main reasons for traffic congestion during rush hour because companies have the same start of work. This enables the control of movement of many people simultaneously but this also makes it difficult for companies to collaborate with other companies which have different starting time for work. Another solution is providing time of toll road use for free. Setting the time before rush hour promotes spontaneous choice to change the departure time of commuters. For example ERP is useful for this idea. It can control traffic by changing the price of the toll according to the time with high vehicular count like during rush hour, but it takes long time and a high cost to become more widespread, most especially in undeveloped countries.

4. Conclusion

Through our discussion, we concluded that it was necessary for solving traffic congestion to collaborate not only with government, but also with citizens or companies. Through our discussion, we could deepen our understandings of the different situations among our countries.



Edited by Maya, Junji

Group 5: Development of energy resources and protection of environment

Members: Takashi, Sho, Puji, Tomtam, Brescia, Shermeen

Contents:

1. Introduction

Today, we have many problems on the energy and we think there are two main problems, which are related to fossil fuels. One is global warming and another is sustainability of resources. Electricity productions by fossil fuels are low cost and steady. And countries they don't have these resources have to absolutely depend on importation of them. Nuclear energy has developed as the alternative of fossil fuels to solve these problems; Electricity production by nuclear energy doesn't emit greenhouse gas and its resources. But it can't solve the problem of sustainability completely and it has other problems. It always needs a high level technical control and once the control is lost, a huge disaster will occur such as Chernobyl disaster or Fukushima disaster. And it doesn't emit gas but produce radioactive waste. We have not found the answer for it yet.

So to solve the problems, we have developed the technology of renewable energies; solar, wind, water, etc. Many countries and companies introduce these energies but they haven't replace fossil fuels and nuclear energy. We thought that we have to develop new technology to protect the environment and we can achieve it by introducing renewable energy more. So we discussed the reason why they haven't first.

2. Discussion

We researched the reason and found three answers. First one is their stability. When the sun doesn't shine, we can't use solar energy. When the wind doesn't blow, we can't use wind energy. We need continuous and steady supply of electricity and fossil fuels can do it. Second one is land. Plants of renewable energies need more than 100 times area to produce the same amount energy generated by fossil fuels. Last one is the cost. Renewable energy is still more expensive than conventional energy.

We consider that if cost problem is solved, usage rate of renewable energies will increase although completely replace conventional energies. So we focused on the problem of cost in this presentation.

3. Suggestion

We discussed the solution to decrease the production cost of renewable energies. But we didn't know these technologies in detail and what kind of technologies were developing. So we decided to find solutions which are social, not technical.

Feed-in Tariff system is commonly used in many countries including Japan. It requires electricity companies to buy renewable energy at a certain price. Cost problem matters especially when

introducing and it is known that cost of energy become lower as its usage spread. So the system is efficient when renewable energy. But its Tariff, selling price decided officially is very important. If it is too expensive, electricity companies will have got a large loss. But if too cheap, the system does nothing.

So we introduced a Green certificates system. In the system, renewable energy gets additional value and producers can get the certificates for the value. And electricity companies are required to get a certain amount of the certificates. So electricity companies have to introduce renewable energy or buy the certificates. The certificates are traded on the marked so the problem of price doesn't occur such as FiT.

Another solution is Corporate Finance. It is the way of investment and financing. To begin the project of renewable energy production, huge money is needed: Building plant, buying lands. So when a company starts a project, it usually obtains loans or raises funds from investor. In a case of project finance, some companies make a new company just for the project and banks or sponsors invest to the company. In this case, Companies which made the project company have roles only operating the project. So it can be replaced by other company. So the risk of the financial situation of operating companies can be decreased and it realize obtaining larger funds.

4. Conclusion

Due to the limited resources and the possible cost, we have to reduce our dependency in nonrenewable energies. And from the view point of protection of the environment, we also have to develop and use the energy which doesn't destroy the environment. We think that it is renewable energies such as solar, wind and that if we can generalize, spread the usage of these energies more and more, the cost problem and the other problems will be solved more quickly. So we suggest the solutions that realize introducing renewable energies more easily at the point of cost.

Resources must be exhausted if we use them. So though it is not now, we have to change energies to use in the future. So not only to protect the environment, to develop and introduce renewable energies are important and we strongly recommend them.

Edited by Sho

Evaluation of Tokyo Tech-AYSEAS 2016

All 31 students who participated in Tokyo Tech-AYSEAS 2016 were given a questionnaire about the program on August 30. The following evaluation was based on the answers to the questionnaire. The first half of Q1 in Section B only by Tokyo Tech students, Section E was answered only by non-Tokyo Tech students, and the rest of the questions were answered by all students. Unfortunately, one person did not submit.

[Section A] Evaluation for overall Tokyo Tech-AYSEAS 2016

A-1. What was your FIRST MOTIVATION to participate in this program?

Answers

- To visit companies (Thailand, Japanese) (9 people)
- To make International networking (make friends) (7)
- Professor's recommendation (4)
- To visit Automobile company (3)
- To learn foreign culture (3)
- To enhance my English skill (3)
- To interact or have a discussion with students from different background (3)
- To learn current technology (2)
- To learn the current condition in Thailand (2)
- Friends' recommendation (1)
- Since I have a plan to continue my master degree in Tokyo Tech. (1)
- Don't want to attend school (1)
- To enjoy with friends (1)

Comment

Most of Thai students participated in this program to visit companies of the field with their interest. Many of other students did to make international networking and enhance their English skill.

A-2. Were you satisfied with Tokyo Tech-AYSEAS2016? (Rate 1 (Not satisfied at all) to 5 (satisfied very much))

Rate	5	4	3	2	1	Average
Number	17	11	2	0	0	4.5

	All members (30)	Tokyo Tech students (10)	Overseas (20)
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Average	4.5	4.4	4.55
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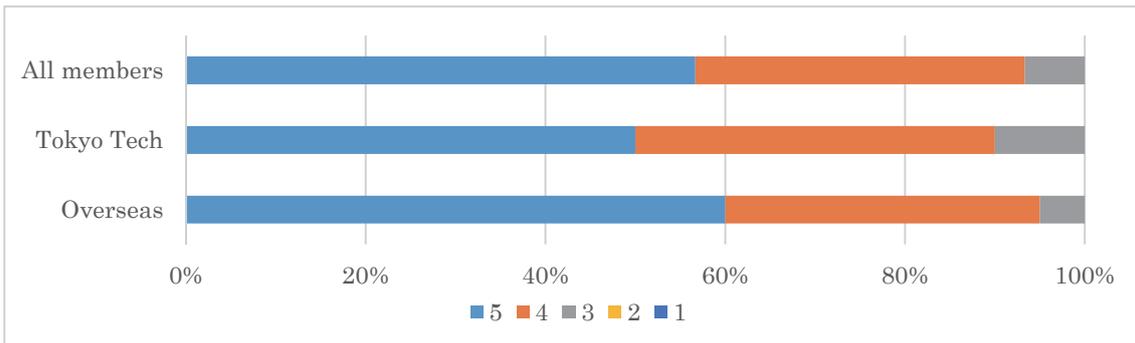


Fig. Evaluation of Satisfaction

Comment

Almost all students were satisfied with this program. Some participants left comments, such like, “I really like this program.”

A-3. What did you think of schedule arrangement? (1 (very hard) to 5 (not hard at all))

Rate	5	4	3	2	1	Average
Number	5	11	10	2	2	3.5

	All members (30)	Tokyo Tech students (10)	Overseas (20)
Average	3.5	2.8	3.85

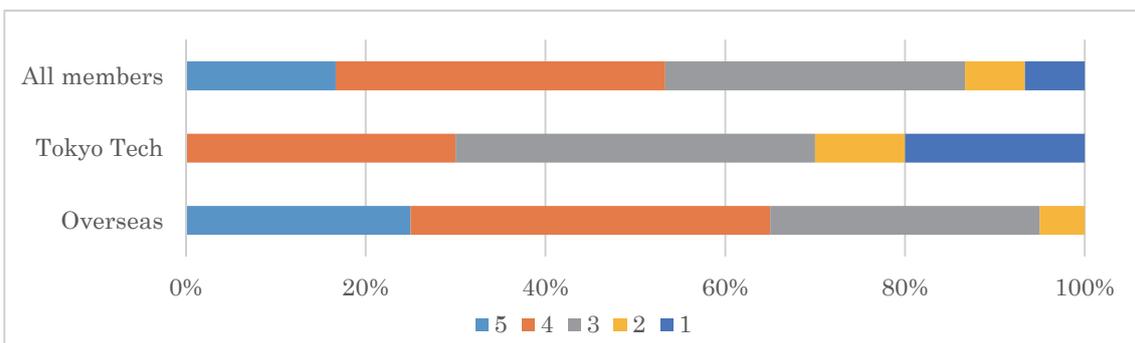


Fig. Evaluation of schedule arrangement

Opinions

- Bit rough schedule
- For some events, we can rearrange and change the period
- We should have considered traffic jam.
- We have a lot of free time but not on time.

- For this program, we have to travel a long distance for visit a company in Thailand and do a lot of activity. A lot of long day trip but we can handle it.

Comment

I think the reasons why an evaluation is low are a tight schedule and little lunch time.

A-4. Describe your suggestions, ideas and comments for all of Tokyo Tech-AYSEAS.

Answers

- *I am very satisfied in this program. Thank you for choosing me to participant. (5 people)*
- *Longer discussion period rather than very short discussion period. (3)*
- *If all of us can study together, it will be great.*
- *There are some problems transporting.*
- *It took long time from one place to another.*
- *To become student of Tokyo Tech AYSEAS easier.*
- *Give more details about the cultural exchange beforehand.*
- *More countries members should be involved.*
- *More activities.*
- *Lunch time is too rush.*
- *Schedule should be flexible.*
- *Promote use of Facebook before*
- *Visiting KMITL lab*
- *In order to know each other, do some recreation in the Bus next program.*
- *Be more associated with topic and visit*
- *Reduce some visits to companies*
- *Schedule is more correct*
- *Maybe choose a hotel closer to town next time for easier accessibility*
- *Give more technical talks about the coming factories.*
- *Staff members are so nice and caring.*
- *I think the program should open a presentation competition about factories that participants visited.*
- *It was difficult to make concrete final presentation with such a few meeting time.*

[Section B] Evaluation for overall Tokyo Tech-AYSEAS 2016

B-1. Please grade each part of the program (Rate 1 (Not satisfied at all) to 5 (satisfied very much)).

Table. Program in Japan (only for Tokyo Tech students)

Program	Average
Energy issues for sustainable community	4.20
Biological assessments of your developing technology as a special field of the supposed person you are visiting.	3.60
Technology and Ethics for Sports	3.90
Electromagnetic waves in materials	3.20
Introduction to nanoscience and nanotechnology	3.20
Nippon Steel & Sumitomo Metal Factory tour	4.57
Thai language and culture class	4.10
Presentation	3.60
Total	3.80

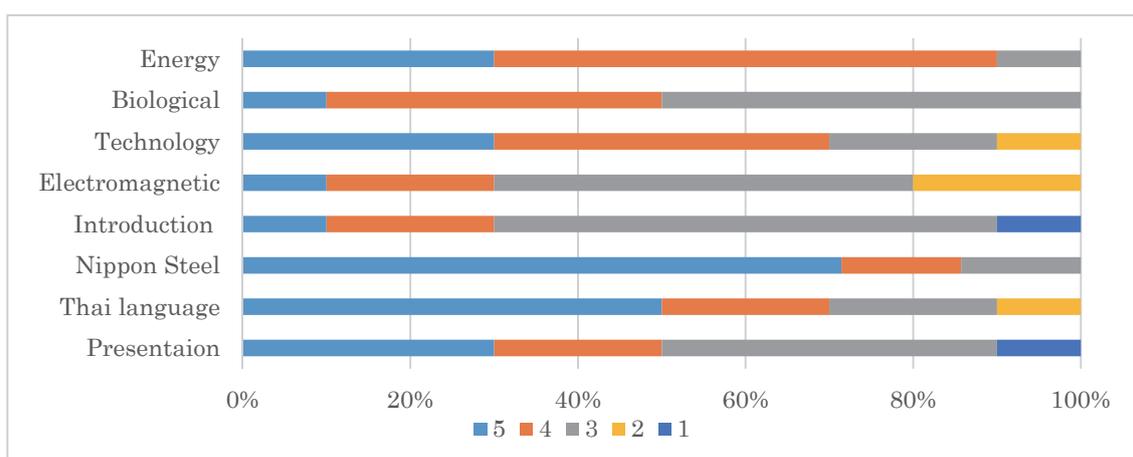


Fig. Evaluation of the preparatory studies in Japan

Table. Program in Thailand (for all participants)

Program	All (30)	Tokyo Tech (10)	Overseas(20)
King Mongkut's Institute of Technology Ladkrabang (KMITL)	3.98	4.3	3.81
Mitsubishi Elevator Asia Co., Ltd.	4.04	3.7	4.24
National Science and Technology Development Agency (NSTDA)	3.43	2.8	3.78
Nissan Motor Asia Pacific Co., Ltd.	4.66	4.5	4.75
Summit Auto Body Industry Co.,Ltd.	4.02	4	4.03
Akebono Brake (Thailand) Co., Ltd	3.95	3.4	4.25

UNESCO Bangkok	3.62	3.5	3.69
Betagro Foods Product International Co., Ltd. (BFI)	4.08	3.8	4.27
Total	3.98	3.75	4.11

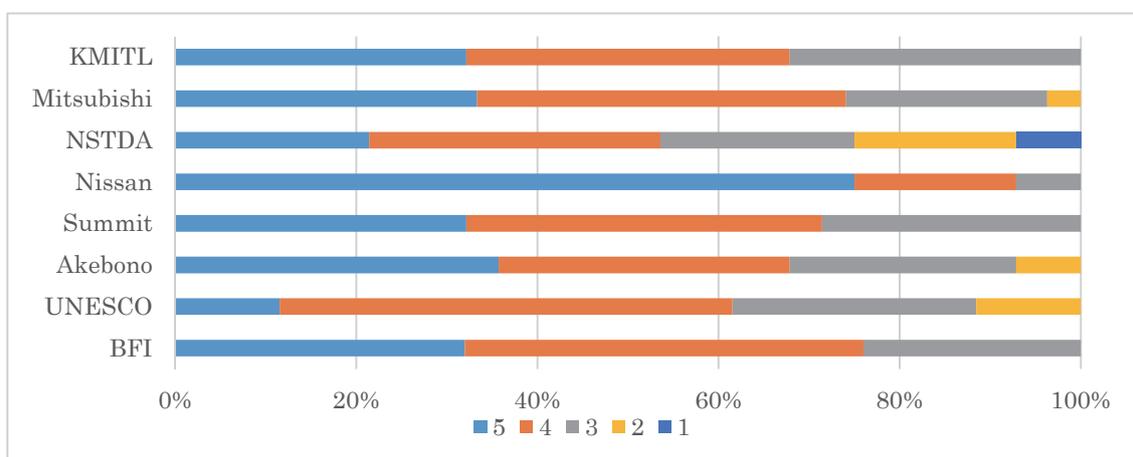


Fig. Evaluation of Program in Thailand

B-2. Please choose the best 3 programs from your viewpoint within technical visits. Then, describe the reason of your choice.

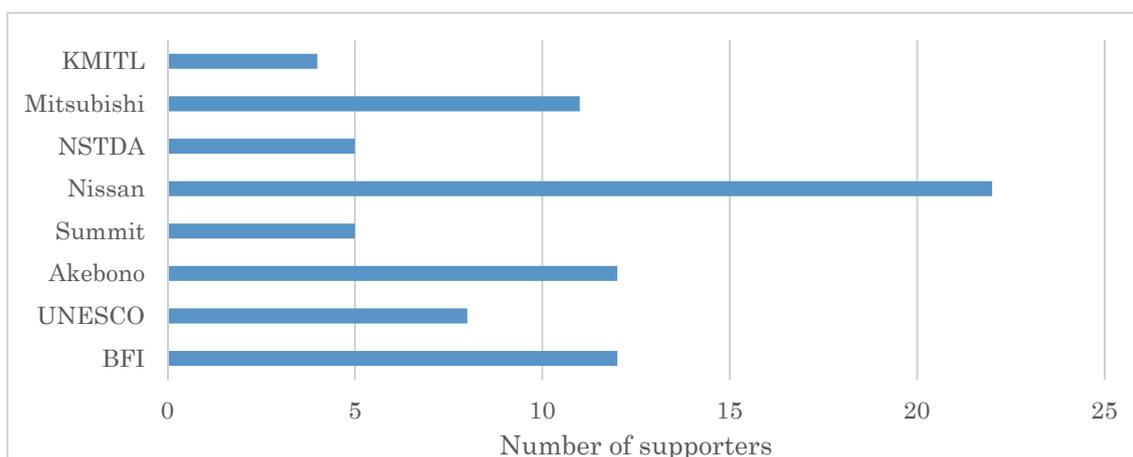


Fig. Evaluation of Technical Visits in AYSEAS 2016

Opinions

King Mongkut's Institute of Technology Ladkrabang (KMITL):

- *Good system and infrastructure*
- *Students are very good! Students study very hard, and that stimulates me*

Mitsubishi Elevator Asia Co., Ltd.:

- *I saw how various parts of manufacture were important when building the lift*

- *We could see what we can see only factory tour*

National Science and Technology Development Agency (NSTDA):

- *They got many new innovation that are very useful in the future*

Nissan Motor Asia Pacific Co., Ltd.:

- *They don't hesitate to give us all knowledge so we can understand what they do.*
- *I like the process of trying the different test*
- *We could see and ask about factory a lot especially about research*
- *Treatments are very good. Very clear what this company does*

Summit Auto Body Industry Co.,Ltd.:

- *I got interested in Automotive industry*
- *I was surprised at the situation that local people run the company as the same quality to the company that is Japanese company.*

Akebono Brake (Thailand) Co., Ltd:

- *Very technical but we learn a lot from it*
- *I could put my knowledge of my major during tour*

UNESCO Bangkok:

- *I realize that technology and knowledge can be used to improve the lives of the lower*
- *We discussed with President Kim. Talking with top of international organization is rare*

Betagro Foods Product International Co., Ltd. (BFI):

- *Get a new inspiration to establish my own company in future*
- *It was first time I saw the actual production work in a food manufacture company*
- *The lunch as well as tour was very good*

Comment

They were satisfied with where they could gain new knowledge from presentation and real process in their factories. Companies related to their major or interest are supported.

[Section C] Evaluation for “Discussion and Presentation”

C-1. What did you think about discussion and presentation (discussion topic, group discussion and final presentation)?

Please grade the method (Rate 1 (Not satisfied at all) to 5 (satisfied very much)), then describe your opinion

Rate	5	4	3	2	1	Average
Number	8	11	7	1	0	3.96

	All members(27)	Tokyo Tech students(10)	Overseas(17)
Average	3.96	3.6	4.18

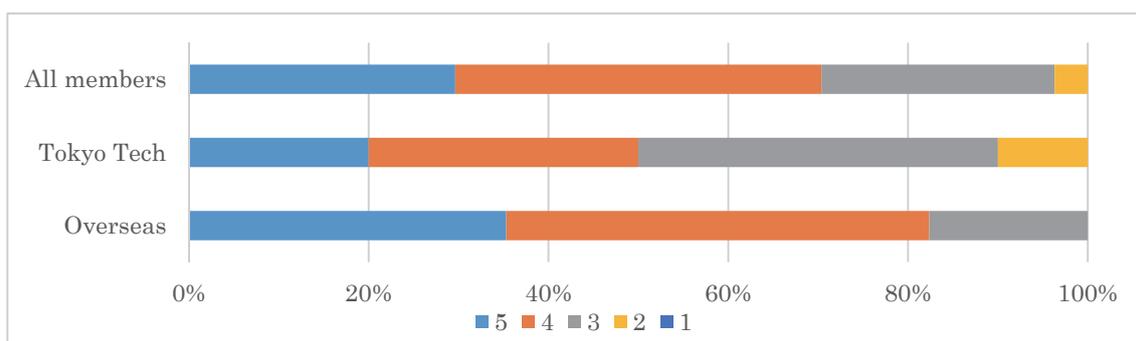


Fig. Evaluation for "Discussion and Presentation"

Opinions

- *The Topic is related with present globalized problems and future issues, so we can gain more knowledge about that.*
- *The Topic may makes us confused. But my group is able to solve this problem and we have many different ideas from many countries. Our teamwork is quite good.*
- *Topics are interesting, but they also depend on member's attitude.*
- *This section is good for control to be on time but there are some groups that have same topic.*
- *The most important thing of this program isn't a final presentation but to learn the life and culture in each country.*
- *I could get my skill to share with international students.*
- *Presentation-discussion run very well.*
- *We didn't have enough time to make the presentation better. We spent a lot of time for visiting.*
- *The difficulty level is good. There is room for debate and discussion.*
- *I wanted more time to discuss. It is nice time.*
- *We visited many automobile companies, so the topic related to car was easy to discuss, but other topic seemed to be difficult.*
- *I wanted to choose the topic related to visiting.*
- *I had a little sick in bus.*
- *There was not enough time to do meaningful research on the given topics.*
- *It was my first experience to discuss and present with other country's student and I was so stimulated with the point of view and aggressiveness to show their own opinion of foreigners. I was the leader of my group and I could know how to manage the group which includes foreigners. But the meeting time is not enough for us and the quality of presentation is not in my satisfaction.*

Comment

As is mentioned above, discussion and presentation were precious for all participants because they can gain the knowledge related to the topics and share ideas with international students. However, some of them thought discussion and preparation time were short for fruitful results and wanted the topics to be associated with visiting.

C-2. Please grade following items (Rate 1 (Not satisfied at all) to 5 (satisfied very much)), then describe your opinion.

Table. Evaluation about Discussion and Presentation

	All members (27)	Tokyo Tech (10)	Overseas (17)
Time for discussion	3.86	3.2	4.21
Number of members in each group	4.55	4.4	4.63
Time for preparation	3.90	3.1	4.32

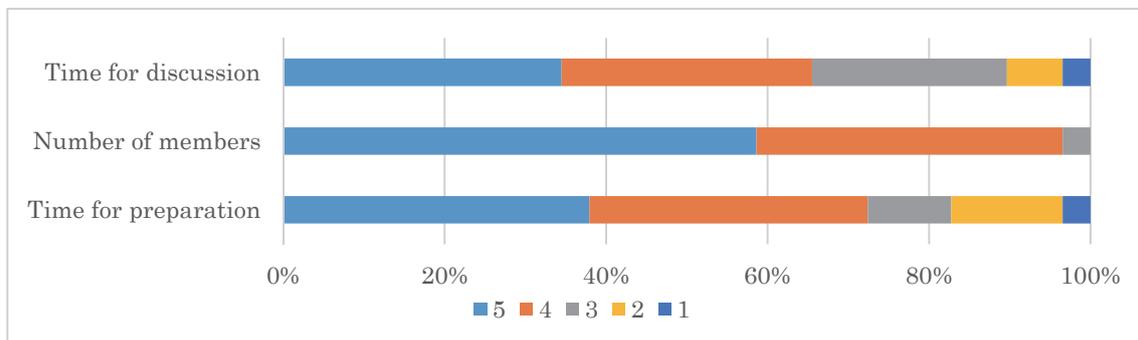


Fig. Evaluation about Discussion and Presentation

Opinions

Time for discussion

- Need more time (10 people)
- Good (8)

Number of members in each group

- Good (14 people)
- More countries should be involved (1)
- 2-3 members are best (1)

Time for preparation

- Good (11 people)
- Need more time (5)

- Too much time (2)

Comment

Many participants think Number of members and Time for preparation are appropriate. But many participants needed more time for discussion.

C-3. What did you learn throughout discussing with members?

Answers

- *Opinions from different academic or cultural background (18 people)*
- *Other countries situation or culture (3)*
- *English skill (1)*
- *It's important for discussing to try again and again in order to tell the idea exactly. (1)*
- *When I suggest something, they require the reason why I think so and the basis, so I learned that I have to make my idea clear before I say it. (1)*
- *The situation of energy in the world. (1)*
- *We can't discuss without listening and understanding. (1)*
- *It is very difficult to sum up every member's opinion (1)*
- *Asian students are not so bright and don't have motivation to discuss. (1)*
- *How to explain my opinion. (1)*
- *To always make sure your groupmates understand everything that was being discussed to avoid miscommunication in the future. (1)*
- *How to get used to different English accents. (1)*
- *How to manage the group with foreigners as the leader and how to make progress for the final presentation. It was different to the style I experienced in Japan. (1)*
- *I could notice the importance of the English, especially in study department. My ignorance of English made the discussion stagnate. (1)*

Comment

Many people could learn the opinions from different background and how to discuss with people have different background.

[Section D] Your opinion for future Tokyo Tech-AYSEAS

D-1. What kind of program do you want to join?

Answers

- *Something like AYSEAS (12 people)*
- *Automobile Field (5)*

- *Study Program (2)*
- *Visiting Lab (2)*
- *Close Recruitment for Tokyo Tech (1)*
- *International program for Graduate (1)*
- *Power Plant (1)*
- *Completely different from my country's culture (1)*
- *None (4)*

Comment

Most participants want to join something such as AYSEAS. I think that this question is not necessary because the intent of this question is similar to that of question D-5.

D-2. Which country should we visit in the next time?

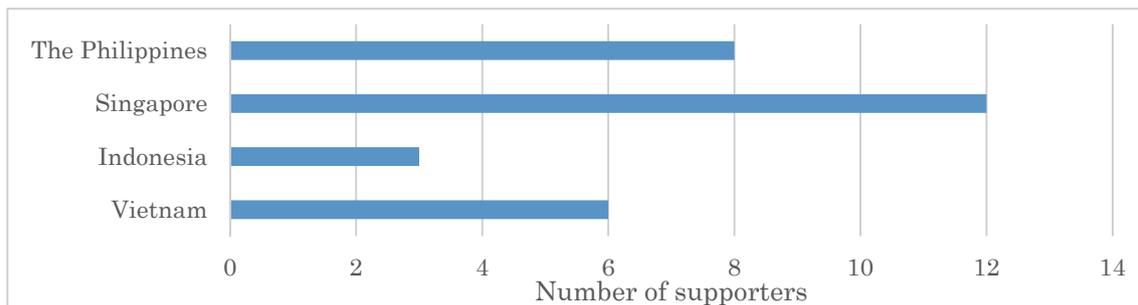


Fig. Which country should you visit in the next time?

Comment

This time, we had to choose among those four countries in this question. I don't know the reason why people chose it, so I would like to ask why you chose the country.

D-3. What did you think the number of days (length) for Tokyo Tech-AYSEAS2016?

Comment

22 participants think 10 days is proper but some students need more time or think it was too long.

D-4. What kind of discussion topic do you want to suggest for the future Tokyo Tech-AYSEAS?

Answers

- *Automotive industries and car technology (5 people)*
- *Social problem (Such as Racism, Ethical issues) (2)*
- *More associate to country or visit (2)*
- *IT (Such as AI, Cyber Attack) (2)*
- *Globalization of ASEAN countries*

- *How to increase the government capacity to developing country*
- *Cultural difference within ASEAN*
- *Geothermal energy and social effect*
- *Role of engineers to prevent society from wars or disasters*
- *Import of materials or Technologies in society*
- *Theory of Physics*
- *Innovation*
- *Limit of Resource*
- *Telecommunication*
- *Copyright*
- *Education for scientists and engineers*
- *Importance to protect time or of punctuality*
- *The topic which is more abstract*
- *RISKS AND OPTIMIZATION*

Comment

Most of the topics we thought are included in the topics that were given by professors. But topics about IT are not included in them and famous social problem, so to add it to next program's topics is probably better. In my opinion, topics related to technical visits would be better for the topics.

D-5. Your suggestions, ideas, and comments for future programs.

Answers

- *Make schedule management severe (2 people)*
- *Prefer shorter time on the bus*
- *Should have various factory visit*
- *Manage the route of plant tour*
- *Provide accommodation budget or accommodation support from host university*
- *A humanities based program*
- *Involve more countries to join*
- *Enable group discussion online before the program starts*
- *Mixture of students during site visits*
- *Let participants know items we need before (Such as Shoes)*
- *Some event on the bus*
- *After we arrive at hotel, we become freedom. Thanks that, I had the nice time with foreign students. It should be thought importantly.*
- *Have as much fun as we did, if not more*

- *More technical talks*

[Section E] Present state in your university (For non-Tokyo Tech students)

E-1. When and how did you know about Tokyo Tech-AYSEAS first? (from your friend? past AYSEAS participants? Ad?)

Answers

- *School E-mail (6 People)*
- *Professor (5)*
- *Friend (4)*
- *Web (2)*
- *Ad in international office (1)*
- *The head office of Tokyo Tech in my country (1)*
- *TAIST-Tokyo Tech Staff (1)*

E-2. What kind of Tokyo Tech-AYSEAS advertisement was displayed in your university?

Answers

- *E-mail (7 People)*
- *None (3)*
- *Web (3)*
- *Verbal advertisement (4)*
- *Poster (2)*
- *TV cable (1)*
- *Radio (1)*

E-3. Was there any interview test in your university?

Answers

Yes (1)
No (18)

E-4. What was the first time to meet with your university members?

Answers

- *Acquaintance (7 People)*
- *First day of this program (5)*
- *One week before this program (4)*

Comment

It depends on their situations.

E-5. Were there any preparatory study sessions in your university?

Answers

Yes (0)

No (19)

Comment

All students from ASEAN countries had not had study session but they prepared by themselves.

E-6. Any suggestions, ideas, and comments to improve future application process?

Answers

- *More advertisement (4 people)*
- *Interview (2)*
- *Booth made by past AYSEAS participants (1)*
- *Grade should not be requirement. Potential should be looked upon person. (1)*
- *None (9)*

Conclusion

I hope this evaluation will have a good influence on the future AYSEAS program. What you understand through reading this evaluation report is that AYSEAS 2016 program did influence so many participants in an irreplaceable way and changed their ideas of the importance and difficulty of intercultural communication, the rising Asian industry that has many strengths as well as weaknesses, Asian problems, and lot more elements that are going to get more and more crucial in the near future when many more Asian people come to cross national borders and have to live side by side without conflicts. In that kind of world, there must be people who can lead the people around to avoid meaningless fights and to achieve a better place to be. All the AYSEAS participants have advanced one step closer to become such future global leaders, and we must keep moving forward. It must improve itself year by year and show its presence to the world in order not to clog the current of interaction among brilliant Asian students and their cultures. For that reason, this evaluation report should exist. All the participants politely gave us their feedback for the future this year, which is not so ordinary, and we, especially who will be involved in running this program, shall make use of this to the best. If you want to join AYSEAS program through reading this, it couldn't be better for me. We're really glad to have you read our evaluation report.

Edited by Takashi

ASEAN

1. Overview

- Establishment

The Association of Southeast Asian Nations(ASEAN) was established on August 1967 in Bangkok, and initial members are Indonesia, Philippines, Singapore, Thailand. After, Brunei Darussalam, Viet Nam, Lao PDR, Cambodia joined to the ASEAN.

- Flag

ASEAN Flag is a symbol of participating countries' unity and is a means to promote ASEAN awareness and solidarity.



Figure 2: Flag of ASEAN

- Motto

“One Vision, One Identity, One Community.”

- Aims and Purposes

In ASEAN Declaration, seven aims and purposes are declared,

- To accelerate the economic growth, social progress and cultural development in the region in order to strengthen the foundation for a prosperous and peaceful community of Southeast Asian Nations;
- To promote regional peace and stability through abiding respect for justice and the rule of law and adherence to the principles of the United Nations Charter;
- To promote active collaboration and mutual assistance on matters of common interest in the economic, social, cultural, technical, scientific and administrative fields;
- To provide assistance to each other in the form of training and research facilities in the educational, professional, technical and administrative spheres;
- To collaborate more effectively for the greater utilization of their agriculture and industries, the expansion of their trade, including the study of the problems of international commodity trade, the improvement of their

transportation and communications facilities and the raising of the living standards of their peoples;

- vi. To promote Southeast Asian studies; and
- vii. To maintain close and beneficial cooperation with existing international and regional organizations with similar aims and purposes, and explore all avenues for even closer cooperation among themselves.

2. Conference

ASEAN Summit, which is the conference of ASEAN countries is held irregularly. The newest Summit was held in 6-8 September 2016 in Vientiane, Laos. And they made 7 agreements and declarations, for example, “ASEAN-Australia Joint Declaration for Cooperation to Combat International Terrorism”, “ASEAN Declaration on Strengthening Education for Out-of-school Children and Youth (OOSCY)”, and so on.



Figure 3: 29th ASEAN SUMMIT

3. Relationship with Japan

ASEAN countries is one of main partner for trade and investment in Japan. To make them easy, Japanese government concluded Economic Partnership Agreement with Some ASEAN countries. Also, in 2008 ASEAN-Japan Comprehensive Economic Partnership Agreement entered into force and it is expected that further activation of trade and investment between ASEAN and Japan.

And Japanese government has been providing big cooperation for ASEAN countries. Recent years, the government provides the infrastructure improvement or development of human resources for the “Mekong region”, which development is later than other ASEAN countries to eliminate the gap in the ASEAN region.

4. Reference

ASEAN (<http://asean.org/>)

Ministry of Foreign Affairs of Japan “ASEAN と日本～アジアの平和と繁栄のために”(<http://www.mofa.go.jp/mofaj/press/pr/wakaru/topics/vol64/>)

Thailand

1. Overview

Thailand is a country at the center of the Indochinese peninsula (Fig.1). The size of the country is about 513,000 km², 51st-largest country in the world. The population is about 66 million people, 20th-most-populous country in the world. The capital is Bangkok.

Now it is constitutional monarchy but it was a parliamentary democracy until the coup d'état in May 2014.

And the economy is the 20th largest by nominal GDP and 27th largest by GDP and PPP in the world. Manufacture, agriculture, and tourism are the leading industry.

In the former period, Thailand is called as “Siam” (means “dark” or “brown”) and the name “Siam” can be seen in the country as like company name.



Figure 4 : Location of Thailand



Figure 5 : Flag and Emblem

2. History

- Before modern period

There was the trace of human habitation even in 40000 years ago. In the ancient period, Thailand is ruled by Khmer Empire, which has Hindu roots and it influences even now in Thailand.

The famous sightseeing spot, Ayutthaya was former capital but it was destroyed in Burmese-Siamese War (1765-1767) between Myanmar and Thailand.

The current era of Thai history began in 1782, when the capital was established in Bangkok by King Rama I the great. Despite of the European countries' invasion to the Asia, as you know, Thailand is the only nation to never have been colonized in Southeast Asia. Thanks to the rulers who exploited the rivalry and tension between French and British Empire in the past 400 years, the country wasn't colonized at all.

- Modern period

In 1917, the country joined the Allies of World War I and the country got to be victor of WWI. In 1932, a bloodless revolution was happened and the absolute monarchy ended at the time. In 1939, the country name was changed from "Siam" to "Thailand".

During WWII, the empire of Japan invaded Thailand on 8 December 1941 because they have to pass across the Thailand to go to the Malayan frontier. Shortly thereafter, Thailand government permitted to pass across. On 21 December 1941, Japan and Thailand signed a military alliance in secret. But in 1942, Thailand declared war on the US side so they undertook to "Assist" Japan against the allies. After the war, the country got political instability, and finally it went stable in 1980s.

3. Economy

Thailand is called as a newly industrialized country. The GDP of Thailand is about 673 million US dollars. it is the 2nd largest economy in southeast Asia. Further, the Thailand is the 4th richest country in Southeast Asia by the GDP per capita. And the unemployed ratio is just stood at 0.84% in 2014.

Thailand experienced the world's highest economic growth rate from 1985-1996, 12.4% in a year for average. But it stops in 1997 and the ratio is fell to 10.8%. In 1999, it started to recover, thanks to the exports.

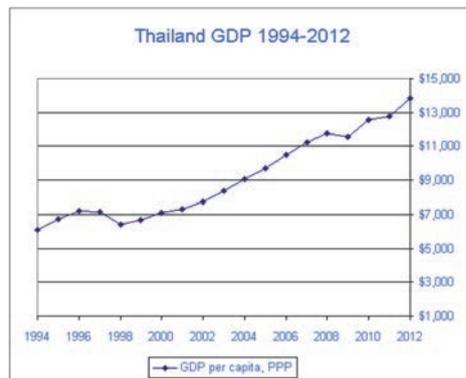


Figure 6 : GDP in Thailand

4. Culture

Thai culture has been influenced by other neighbor countries, for example, Indian, Lao, Burmese, Chinese and Cambodian.

- Religion

Thai national religion is “Theravada Buddhism”, which is now center of Thai people’s life. Now the Gregorian calendar is used all over the world but in Thailand, officially used calendar is based on Buddhist era, so this year (2016 A.D.) is expressed as “2558 B.E.” in Thailand.

- Manner

In Thailand, there is a traditional greeting “Wai”. It is usually offered first by younger, with their hands pressed together, and say, “sawatdi khrap” (male) or “sawatdi kha” (female). It means the respect for the opponents so the order of greeting will change for social hierarchy. Even if the boss is younger than subordinate, the subordinate has to greet first.

There are taboos in Thailand that touching someone’s head or pointing with the feet. It is from the point of view that the head is most sacred and the foot is lowest part of the body.

- Cuisine

Thai cuisine has five fundamental tastes; sweet, spicy, sour, bitter, and salty. To make the taste, some ingredient, garlic, chilies, lime juice, lemon grass, coriander, galangal, palm sugar, or nam pla is used. Some of them is added to make the smell and they aren’t able to eat. And Thai staple food is rice (Indica rice), the consumption of rice is over 100kg for a person in a year.



Figure 7 : Pad thai

5. References

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Thailand _ Gross Domestic Product (GDP) and GDP Growth Rates. Income Distribution and Disparity. (URL: <http://www.thaiwebsites.com/thailand-GDP.asp>)
Thai cuisine - Wikipedia, the free encyclopedia (URL: https://en.wikipedia.org/wiki/Thai_cuisine)

Edited by Ichitaro

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Tokyo Tech	Chinami Mitsuno	International affairs division
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