Tokyo Tech−AYSEAS

2021 Online

Tokyo Tech−Asia Young Scientist and Engineer Advanced Study Program

Final Report

-From Asia to the World-

ACKNOWLEDGEMENT

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I. ABOUT THE PROGRAM
1. PROGRAM INFORMATION
1.1 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 among promising young persons in Asia. With more than 500 alumni, the two programs have nurtured lifelong friendships among participants. 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 countries' industry, education and government.

This year, the program was held online for the first time. With the same spirit as previous iterations, the theme is "From Asia to the World." The program primarily consisted of the two parts outlined below:

(1) Pre-study sessions
The Tokyo Tech participants had pre-program orientation sessions lectured by Tokyo Tech professors in Japan to prepare for discussions in English and to deepen understanding of South East Asia.

(2) Activities with all participants from August 30 to September 6, 2021
- Cultural exchange virtual party
- Talk session with past participants of JAYSES
- Virtual visits to companies and organizations
- Group discussions and presentations

The topics of the Group discussions and presentations are indicated below:
Group A: Accelerating global education
Group B: Connecting the world for the better education
Group C: Cultural Heritage of Asia: Sustaining and Empowering
Group D: What to do when a disaster is occurred during a pandemic
Group E: Providing Alternative to Solve Brain Drain
Group F: Transferring technology for sanitation

1.2 Objectives
- To experience collaboration with students from different nationalities, cultures, languages, viewpoints or fields of study.
- To brush up English as an international language.
- To develop friendship ties with students from different countries.
- To get motivated to be global leaders.

1.3 Participating Universities
Japan:	Tokyo Institute of Technology (Tokyo Tech)
Indonesia:	Institut Teknologi Bandung (ITB)
	Univeritas Gadjah Mada (UGM)
Thailand:	King Mongkut's Institute of Technology Ladkrabang (KMITL)
	King Mongkut's University of Technology Thonburi (KMUTT)
	Kasetsart University (KU)
The Philippines:	De La Salle University (DLSU)
	University of the Philippines, Diliman (UPD)
Vietnam:	Ho Chi Minh City University of Technology (HCMUT)
	Hanoi University of Science and Technology (HUST)

1.4 Benefits for the participants
- Participants can develop an international human network.
- Participants can learn about ASEAN area.

- Participants receive certificates signed by an Executive Vice President of Tokyo Tech.
- Participants can collect useful information about studying at Tokyo Tech.
- Participants can improve their English skills.

1.5 Expected Results
- More Japanese students will go to study abroad.
- More ASEAN students will come to study in Japan.
- A strong network will be established between top-ranking universities in ASEAN countries and Japan.

2. SCHEDULE OF TOKYO TECH-AYSEAS 2021 ONLINE

May – June, 2021   Announcement and application
June – July   Selection
July   Pre-study sessions*
August 30 – September 6   Main activities**

*Schedule of pre-study sessions

Date	Time （JST）	Program
7/6 (Tue)	18:05–19:45	Orientation
7/13 (Tue)	18:05–19:45	Discussion practice session
7/27 (Tue)	18:05–19:45	Lecture: Understanding Asia

**Schedule of main activities

Date	Time （JST）	Program
8/23 (Mon)	17:30-18:30	Pre-Event
8/30 (Mon)	10:30–12:30	Opening ceremony, Orientation, Icebreaking session
	14:30–16:00	Talk session by past participants (JAYSES 2010 & 2011 participants)
8/31 （Tue）	10:30–12:00	Virtual visit to Japan International Cooperation Agency (JICA) Viet Nam
	14:30–16:00	Virtual visit to Kopernik Japan
9/1 （Wed）	9:30–11:00	Virtual visit to Hitachi, Ltd.
	14:30–16:00	Group discussion
9/2 （Thu）	10:30–12:00	Lecture: Development and Natural Disasters in Asia
	14:30–16:00	Group discussion
9/3 （Fri）	10:30–12:00	Group discussion
	15:00–16:00	Optional session: Study @ Tokyo Tech (Open to all students of AYSEAS member universities)
9/6 （Mon）	10:30–12:00	Group discussion & presentation practice
	14:00–16:00	Final presentations Closing ceremony

*Participants are encouraged to have discussions with their group members in addition to the "Group discussion" sessions listed in the Schedule.

*The schedule is indicated in Japan Standard Time (JST).
  1 hour: The Philippines (10:30 in JST is 9:30 in the Philippines)
  2 hours: Indonesia, Thailand, Vietnam (10:30 in JST is 8:30 in these countries)

II. PARTICIPANT LISTS

Students

	Name	Nickname	Year	Sex	GROUP	School / Faculty / Department
De La Salle University (DLSU)						
1	Kyle Marcus Latada Sales	Kyle	B3	M	F	Gokongwei College of Engineering - Civil Engineering Department
Ho Chi Minh City University of Technology (HCMUT)						
2	Justine Mharzeline Guanzon	Zei	M1	F	C	Faculty of Civil Engineering, Department of Construction Engineering and Management
Hanoi University of Science and Technology (HUST)						
3	Hieu Tran Thanh	Hieu Tran	B3	M	A	School of Transportation Engineering
4	Nguyễn Hữu Khải	Huu-Khai	B3	M	B	Student of Transportation Engineering
5	Ta Duc Huy	Samson Ta	B3	M	C	Schools of Transportation Engineering
6	Tien-Nghia Pham	TieNix	B3	M	D	School of Transportation Engineering
7	Van-Huong Le	BigShark	B3	M	E	School of Transportation Engineering
Institut Teknologi Bandung (ITB)						
8	Priangga Bagusjalu Narutama	Naru	B3	M	F	Faculty of Mechanical and Aerospace Engineering
9	Helena Aurellia	Helen	B2	F	A	Faculty of Industrial Technology
10	Feldy Tanako	Feldy	B4	M	B	Faculty of Civil and Environmental Engineering / Department of Ocean Engineering
11	Jonathan Bratanata	Jonathan	B4	M	C	Department of Civil Engineering
12	Setiawan Sahar	Seth	B4	M	D	Civil Engineering (Teknik Sipil), Faculty of Civil and Environment Engingeering (FTSL)
King Mongkut's Institute of Technology Ladkrabang (KMITL)						
13	Nalinee Kemthong	Tent	B2	F	A	Information Technology major :Data Science and Business Analytics
14	Panupong Miura	Yo	B1	M	B	mechatronics and automation engineering
15	Pitcharath Phaiboontham	Mek	B1	M	C	Information Technology
16	Korawitch Rergsantad	Luffy	B1	M	D	Mechatronics and automation engineering
King Mongkut's University of Technology Thonburi (KMUTT)						
17	Paramee Vilaiphorn	Ken	B1	M	E	Production Engineer
Kasetsart University (KU)						
18	Manokorn Jantaramai	Nes	B2	M	F	Electrical Engineering
Tokyo Institute of Technology (Tokyo Tech)						
19	Yun Tesan	Tem	B1	M	A	Environment and Society
20	Narumi Iiboshi	Narumi	B1	F	B	Environment and Society
21	Yuki Ozaki	Yuki	B1	F	C	Materials and Chemical Technology

22	Ryo Yasuda	Ryo	B2	M	D	Systems and Control Engineering
23	Hirokatsu Yoshioka	HIRO	B2	M	E	Chemical Science and Engineering
24	Yo Toyomoto	Yo	B2	M	F	Systems and Control Engineering
25	Tsuyoshi Izaki	Yoshi	B3	M	C	Transdisciplinary Science and Engineering
26	Mantaro Kawaguchi	Manta	B3	M	B	Life Science and Technology
27	Rina Satomi	Rina	B3	F	E	Life Science and Technology
28	Ukyo Shibata	Ukyo	M1	M	F	Materials Science and Engineering
29	Takumi Akiyama	Takumi	M1	M	A	Materials Science and Engineering
Universitas Gadjah Mada (UGM)						
30	Amadeo Benvenuto Santosa	Deo	B2	M	E	Department of Soil Sciences
31	Bramadi Arya	Arya	M2	M	F	Biotechnology
University of the Philippines, Diliman (UPD)						
32	Carlos Harry A. De Taza	Harry	B2	M	B	School of Economics
33	Mariz Gebrielle Domingo	Mariz	B3	F	A	College of Engineering - Department of Mining, Metallurgical, and Materials Engineering
34	Charmaine Ann G. Landicho	Charm	B1	F	D	College of Engineering
35	Jeanne Danielle Monreal Go	Jeanne	B4	F	E	Institute of Civil Engineering

Faculty members

	Name	Affiliation
1	Dr. Motomu Nakashima	Professor, School of Engineering
2	Dr. Nobuhiro Hayashi	Professor, School of Life Science and Technology
3	Dr. Shigeki Nakagawa	Professor, School of Engineering
4	Dr. Yusuke Nishida	Associate Professor, School of Science
5	Dr. Hiroshi Takagi	Associate Professor, School of Environment and Society
6	Dr. Kazuko Nakazono	Associate Professor, School of Materials and Chemical Technology
7	Ms. Yasuko Ichinose	Support staff, International Student Exchange Division

III. PARTICIPATING UNIVERSITIES

De La Salle University (DLSU)

Reporter: Rina

DLSU (De La Salle University) is a private Catholic university founded by the La Sal Society in Manila. It was established by the Christian Brothers in 1911 as the De La Salle College (DLSC) in Nozaleda Street, Paco, Manila with Blimond Pierre Eilenbecker, FSC serving as director, and is the first De La Salle school in the Philippines. The institution moved to its present location in 1921. The college was granted university status on February 19, 1975 and is the oldest constituent of De La Salle Philippines (DLSP), a network of 16 educational institutions, established in 2006 replacing the De La Salle

Figure 1

University System. DLSU started as an exclusive all-boys elementary and high school. The number of students is approximately 21,000, and there are various departments ranging from liberal arts to science.

References:

[1] "外国語学部留学ガイド". *Faculty of Foreign Studies, Sophia University*.

https://dept.sophia.ac.jp/fs/international/ryugaku/university_list/asia_oceania/de-la-salle-university/

[2] De La Salle University. https://www.dlsu.edu.ph/

Ho Chi Minh City University of Technology (HCMUT)

Reporter: Yuki

Ho Chi Minh City University of Technology (HCMUT) is a national university in Vietnam. It is the oldest and largest engineering university in the south part of the land.

The university is known for its high-quality training and research. It has received accreditation from HCÉRES (*1) in France. The news was important for both HCUMT and Vietnam because it was for the first time in the nation. HCÉRES examines the quality of academic programs to improve them. Therefore, the certification means that level of education in HCMUT is high in the global standards.

Figure 2

Recently, HCMUT has increased overseas joint projects. It conducts research programs, collaborating with organizations around the world. JICA, where we visited in the AYSEAS program, is also one of the partners.

＊1　High Council for the Evaluation of Research and Higher Education (HCÉRES)

References:

[1] HCMUT　LEAFLET. https://drive.google.com/file/d/1VI2zvqyXFIx0U0NrswXt_fHo4RrNa7zj/view

[2] Ho Chi Minh City University of Technology (HCMUT). http://www.hcmut.edu.vn/en

[3] "Admission". Ho Chi Minh City University of Technology.

https://www.hcmut.edu.vn/en/welcome/view/menu-intro/admission
[4] Hcéres. https://www.hceres.fr/en

Hanoi University of Science and Technology (HUST)

Reporter: Yoshi

Hanoi University of Science and Technology (HUST) is one of the most prestigious and influential multidisciplinary universities in Vietnam. HUST was established in 1956. It is the fifth oldest university in Vietnam and the oldest technical university. HUST has been ranked in the TOP 400 and TOP 500 in the world for four subjects, and HUST is ranked first in Vietnam in the various science fields such as Electrical & Electronic Engineering, Mechanical and Aeronautical Engineering &

Figure 3

Manufacturing, and Computer Science & Information System. HUST currently has 32,000 undergraduate students, 1,500 graduate students, and 1,200 academic staff and technicians. Although the number of students is large for a technical university (ex. the number of undergraduate students in Tokyo Tech is about 5,000), there are many excellent students, and 33% of HUST students are in the top 1% of Vietnam's students. In addition, HUST alumni have also excelled and are now working in key industries and scientific fields.

Reference:
[1] Hanoi University of Science and Technology. https://en.hust.edu.vn/home

Institut Teknologi Bandung (ITB)

Reporter: Yoshi and Ryo

Institut Teknologi Bandung (ITB) is one of the most prestigious and oldest universities in Indonesia. ITB was established under the name De Technische Hoogeschool te Bandung (THS) by the Dutch colonial government in 1920. The establishment of this was to fulfill the needs of technical personnel or engineers due to the outbreak of World War I. After World War II, encouraged by the ideas and beliefs of the Indonesian people, who won their independence, and their bright future, the

Figure 4

Indonesian government established Institut Teknologi Bandung in 1959. ITB is ranked 303 in QS World University Rankings 2022, and the students in ITB are excellent in Indonesia. Indonesia's first president, Sukarno, and Indonesia's richest businessman, Aburizal Bakrie, are some of the graduates of ITB. Currently ITB has more than 26,000 active students, 1.510 academic staff, and 195 professors. ITB now has two main campuses: Ganesa Campus and Jatinangor Campus. ITB has a Japanese culture club, and many students are interested in Japanese culture and Japanese language with engineering knowledge. Because of these factors, ITB is one of the universities in Indonesia where many students find jobs in Japan or go on to graduate school in Japan. ITB has become the leading national university, and a leader in the development of research, technology, and arts in Indonesia.

References:
[1] Institut Teknologi Bandung. https://www.itb.ac.id/
[2] "バンドン工科大学 Bandung Institute of Technology の紹介～インドネシアにおける大学特集 Vol. 3 ～". 外国人採用ノート. https://www.nodejpn.com/journal/humanresource/2756.html

King Mongkut's Institute of Technology Ladkrabang (KMITL)

Reporter: Yoshi

King Mongkut's Institute of Technology Ladkrabang (KMITL) is a public university in Thailand and the Faculty of Engineering at KMITL is one of the most prestigious in Thailand. The origination of KMITL is the Nondhaburi Telecommunication Training Center, which was established in 1960 with academic cooperation from the Government of Japan. In 1986, KMITL became a legitimate public university under a legislation called "King Mongkut's Institute of Technology Ladkrabang Act". The name of the university was derived from the name of King Rama IV. KMITL is one of 12 universities included in U-Multirank for Thailand. KMITL has about 25,000 students and about 2,200 academic staff. In addition, many of KMITL alumni are working for Japanese companies in Thailand.

References:
[1] King Mongkut's Institute of Technology Ladkrabang. http://kmitl.ac.th/en
[2] U-Multirank / King Mongkut's Institute of Technology Ladkrabang. https://www.umultirank.org/study-at/king-mongkuts-institute-of-technology-ladkrabang-kmitl-rankings/
[3] Tokai University International Education Center. http://www.tokai-international.jp/outbound/list/as/c007/

King Mongkut's University of Technology Thonburi (KMUTT)

Reporter: Yuki

King Mongkut's University of Technology Thonburi (KMUTT) is a public university in Thailand. Its origin is in the Thonburi Technology Institute (TTI), established in 1960.

Today, it is famous as a leading research institute in the country.

The main campus is in Thonburi, which is the former capital of Thai.

The model of the KMUTT seal is the one of Mongkut, King Rama IV. The king was also a great scholar who introduced western academics to his country. You can see his name in the name of the university, too. On the first campus, the Dhammaraksa plant grew naturally. Therefore, its flowers are also the symbol of KMUTT.

The focus study areas are science, technology, and innovation (STI). 6 Faculties and 6 Schools are working actively in those fields.

References:
[1] KMUTT | King Mongkut's University of Technology Thonburi. https://global.kmutt.ac.th/
[2] "タイ・チャクリー王朝の歴史". 酔狗奇譚. https://seiryuh.org/chakri_dynasty

Kasetsart University (KU)

Reporter: Ryo

Kasetsart University was originally an agricultural university and has now developed into a comprehensive university. It has the longest history in agriculture in Thailand, and veterinary medicine is also very popular. Kasetsart University has a Japanese language major in the Faculty of Humanities, where many students study the language. It also has an extensive international program, and all classes there are offered in English. And many students come from all over the world. Also, the main campus, Bangkhen campus, is located in the suburbs away from Bangkok, so you can see animals and plants that you

can't see in other campuses.

References:

[1] "外国語学部留学ガイド". *Faculty of Foreign Studies, Sophia University*.
   https://dept.sophia.ac.jp/fs/international /ryugaku/university_list/asia_oceania/kasetsart-university/

[2] "INTERNATIONAL STUDENT HANDBOOK". *Kasetsart University*.

Universitas Gadjah Mada (UGM)

Reporter: Rina

UGM (Universitas Gadjah Mada) was established on December 19, 1949 as a national university and is located on the central coast of southern Java.Kaja Mada University, one of Indonesia's oldest universities, is said to be a pillar of Indonesia's educational awakening, an advocate and disseminator of Pancasira. UGM has 18 Faculties, one

Figure 5

Postgraduate School (S-2 and S-3), and one Vocational School. Universitas Gadjah Mada is one of the oldest universities in Indonesia, located at the Bulaksumur Yogyakarta Campus. The number of students is 4,7081, and there are many departments ranging from liberal arts to science.

Reference:

[1] Universitas Gadjah Mada. https://www.ugm.ac.id/

University of the Philippines, Diliman (UPD)

Reporter: Ryo

The National University of the Philippines Diliman is consistently ranked as the top university in the country and is highly regarded worldwide. The university has an expansive campus of 493 hectares. This is about 20 times the size of Tokyo Tech's Ookayama campus. Therefore, university officials use cabs called "jeepneys" to get around the campus. In addition, the huge campus is equipped with various facilities such as shopping centers, banks, and hotels, making it like a single city. The university has produced many Philippine presidents, lawyers, and politicians, and it plays a major role in education in the country.

Figure 6

Figure 7

Reference:

[1] University of the Philippines Diliman.
   https://upd.edu.ph/

[2] "フィリピン大学ディリマン校への留学　メリット・デメリット". そりはるのブログ. https://www.harunasorita.com/entry/merit-demerit-updiliman-philippines#%E8%B1%8A%E5%AF%8C%E3%81%AA%E5%AD%A6%E9%83%A8%E3%81%A8%E6%8E%88%E6%A5%AD%E3%83%95%E3%82%A3%E3%83%AA%E3%83%94%E3%83%B3%E4%BA%BA%E5%AD%A6%E7%94%9F%E3%81%A8%E5%90%8C%E3%81%98%E6%8E%88%E6%A5%AD%E3%82%92%E5%8F%97%E3%81%91%E3%82%89%E3%82%8C%E3%82%8B%E8%88%88%E5%91%B3%E3%81%8C%E3%81%82%E3%82%8B%E6%8E%88%E6%A5%AD%E3%82%92%E5%B1%A5%E4%BF%AE%E3%81%A7%E3%81%8D%E3%82%8B

[3] カジコ. "「フィリピンの東大」フィリピン大学（ディリマン校）ってどんなところ？".
   iconicJob. https://iconicjob.jp/blog/philippines/university-of-the-philippines/

IV. PRE-STUDY SESSIONS

1. DISCUSSION PRACTICE SESSION

Date: 2021/7/13 (Tue)
Summary: We learn how to speak English better and to discuss better in English
Lectured by Dr. Yuto Koizumi
Reporter: Hiro

I am writing about the second lecture. In this lecture, we were taught mainly about three things in three parts by Dr. Koizumi.

The first thing was the collation of the mindset of the meaning of the word of "fluency." The teacher asked us about it, and one student answered as it's written in the dictionary. And the teacher confirmed its meaning in a dictionary and Wikipedia with us, and he showed us the meaning of "fluency" he thought. This was the main topic of this day's session. The teacher told us "Rules of fluency," which was three things below, to speak poor English, to become a chairperson and to make questions. These three things were guideline for us to enjoy this program. To speak poor English meant not to be afraid of making mistakes but to enjoy it. To become a chairperson meant when we discussed with others, we should take the initiative of a discussion and move it forward. To make questions meant to enjoy taking part in this program, we should ask teachers or group members about our questions. In these three things, I was most influenced by first thing. He said the members who would join this program would not be native speaker of English, so you didn't necessarily care about making mistakes, and this encouraged us to speak English for group members.

The second thing was the expressions for discussion. In this part the teacher taught me a mental preparation for the discussion in this program and in the occasion which we will speak English. He shared us an interesting movie named "Thank you for smoking." Main character of this movie is Nick Taylor, who is the lobbyist for the huge tobacco company. And Dr. Koizumi picked up on the scene of Nick's speech in his child's school. Dr. Koizumi explained the useful expression for the discussion using this movie. For example, "I'm here to say"; expression of telling objectives why I say after thing and "My point is ~," expression for telling the main point of what I talk about. Dr. Koizumi said we usually used excessively "I think ~" for telling my thought, and this was caused by the expression in Japanese he thought. He said to prevent this, we should use other expressions, such as "In my opinion ~," "I would argue that ~," etc. And this was so helpful for me to discuss in English. He said clarification was also important for discussion and told us about many expressions for it.

Third thing was language muscle memory. The language muscle memory was related to fluency and cultivated in a daily use of English. To improve this ability, he suggested us for reading aloud, in detail, we should read aloud with the voice of native speakers. In session, we used the Biden's presidential inaugural address and we read it with the recording of it. The first time we read it, I couldn't read the same pace as the sound. But I practiced a lot and only in this session, I could read with the sound. I was very happy about it. Also, the teacher suggested us overlapping technique, the method of practicing to speak English aloud. This method was divided into three parts. First, we read aloud the script with the sound of reading it. In this part we should adapt to the sound and get used to the pace or pronunciation of the sound. Second, we stop hearing the sound and we read aloud by ourselves. This practice will come to an end when we can read English the same pace as the recording sound, and we can read it fluently. Third, we should understand the meaning of the script in accordance with word order, and we repeat these three things. This part is most important. Because we can read English, but we can't understand the script we read, it doesn't make any sense.

This method helped me a lot in this program. I had practiced before the program using this method, and I could discuss with group members well. I was good to hear this class before Tokyo Tech-AYSEAS program.

2. LECTURE FOR UNDERSTANDING ASIA

Date: 2021/7/27 (Tue)
Lectured by Dr. Takeshi Nakajima
Reporter: Ukyo

2.1 The end of the Cold War

In 1989~1991, the Cold War, which is a period of geopolitical tension between the United States and the Soviet Union, finished. Soon after the end of it, a famous book was published. The title is called "The End of History and The Last Man" by Francis Fukuyama. In this book, he says that the incident that Communism, which the Soviet Union supported, collapsed means the end of history of social changes and new novel things would never come, no more new ideology battles. Capitalism won, in other words, the US won.

Figure 8

On September 11th, 1990, the president of the United States, George H Bush delivers his speech, "Toward a New World Order". That shows to us that the US would become the world police, that is to say, the center of the world.

However, the recession comes from then and continues in the US.

2.2 Decline of the US power and Rebalance

On September 1, 2001, terrorist attacks on the US by the terrorist organization led by Osama Bin Laden. In this case, buildings in New York which is the center of the US and also means the center of the world is destroyed.

From 2000s, India, ASEAN, Brazil, Russia and China also begin to gain power that the US monopolized. Therefore, the age of the US centralization was changing to the age of the diversify of power in the world. We can see the decline by comparing the Iraq War in 2003 and Syrian Civil War from 2011 to the present. In the Iraq War, the US implements open-ended intervention against Iraq economically and military but due to this, the US exhausts. As a result, they are force to retreat out of the Middle East

Figure 9

in 2011, Syrian civil war and a sign of the decline of power of US in the world.

In such a situation, the Barack Obama administration starts Rebalancing policy. To put it simply, this policy appeals that the US can't take a role of the world police anymore and from then we strengthen and weaken the power of the US according to the place. And the US also appeals that the US will cooperate with some countries such as Australia, Korea, Japan and so on which implies the ways to compete against China.

2.3 Asia version NATO

In response to the policy, in Japan, we have hundreds of thousands of discussions about Security legislation and Right of collective self-defense, which refers primarily to the well-established UN Charter right of States to defends other States. However, it has a hard time carrying out these policies because it is restricted under all circumstances by Article 9 of the Japanese Constitution.

In that situation, Shigeru Ishiba, a member of the house of representative, has a thought that Japan also should do Rebalancing policy. It means we rely on the US too much in spite of decreasing the US power now, so what we have to do is to cooperate other countries like ASEAN while keep the relationship with the US. He

calls this system Asia version NATO (The North Atlantic Treaty Organization) which is intergovernmental military alliance between 28 European countries and 2 North American countries. And then we will counter the growing power of China. But it is difficult and there are many problems on that. For example, Laos, Myanmar and some countries in the South East have been depending on China economically. Philippines and Vietnam fight over some issues with China. So, every country will not say "Let's cooperate together".

Current prime minister Suga is also thinking about the cooperation, appealing FOIP (Free and Open Indo-Pacific) and showing his opposition towards China.

In these ways, we should make a union that is not like one country, is looser one.

Figure 10

2.4 Learning from EU

To cooperate with ASEAN countries and make a community like NATO, we may be able to learn something from the EU (European Union), which is a political and economic union made up of 27 member states that are located primarily in Europe.

Generally, it is said that the EU is on the verge of collapse but from a political perspective, the EU is not over yet. Because it exists now and survived through Britain withdrawal in 2019. The EU is a super stable community now thinking from the European war history. However, EU will never become one country. From these points of view, the EU is very mysterious group. It may be halfway but stable, no war. In addition, Latvia, Lithuania etc. can't conduct diplomacy freely without the EU.

Figure 11

And now we have to think the reason why EU isn't gone. There are two reasons. First, European people repeated hundreds of thousands of discussions, cost a lot of times, interacted with each other and sometimes maybe quarreled when they tried to make the EU. But in this way, European countries could find a compromise and create a community, the EU. Second reason is the obviousness that they are European. They earned this concept historically. So, what is Europe? It is Christianity or so. Anyway, the framework that they are European is relatively clear. In also Asia, we want to create a somewhat stable state like the EU.

2.5 What is Asia?

What is the obviousness of Asia. It is too difficult to define this. Because Asia is a very huge place and billions of people are living there. So, even with as simple as a religion, there are many ones such as Buddhism, Shinto, Islam and Hinduism. Can we find one common point or the obviousness in the diverse culture? What is the Asia's Spine?

From the end of the 19th century to 20th century, many famous persons come out, who contemplate that question: What is Asia? How is Asia positioned ideologically, philosophically and as civilization in the world? How we define the flamework of Asia? One of the persons, Tenshin Okakura writes an interesting book,

Figure 12

15

"The Ideals of the East with Special Reference to the Art of Japan". To summarize briefly this book, "Asia is one but when looking various civilization, they are completely different. Nevertheless, still Asia is one."

In what does he can say "Asia is one"? That is "Advaita".

Advaita means the state which is not two and even if what exists appears to be diverse, that is one. It may sound complicated but Gandhi kindly interprets it's idea by the Multi-to-one theory. In this theory, the truth is always one. Because human intelligence is limited, so we try to pursue the truth by different methods, religiously or scientifically and so on. This structural idea, which the truth is one but the ways to there are plural, should be common in Asia and we accept this concept. On the other hand, European people understand that the difference of each way to the truth is the difference of truths.

What was discussed here is more than just a problem of thinking but is the most actual and necessary

Figure 13

method so that Japan will be creating one framework as Asia and we all will do various things in this framework.

V. VIRTUAL VISITS

1. ICE BREAKING SESSION

Date: **2021/7/27 (Tue)**
Reporter: Tem

Students from different countries introduced their own countries. There were Japan, Indonesia, Korea, Philippines, Thailand, and Vietnam. Each presentation introduces their country or culture to other students for a better understanding of their country. During this time, a lot of information about the country and culture was presented, but here are some of the most impressive.

1.1 Japan

First, the Japanese team presented Origami, a form of Japanese culture. Among the many things that can be made with Origami, they showed how to make a crane. The presentation showed the procedure of doing Origami. Everybody in the zoom could experience it because we need only one paper to follow it.
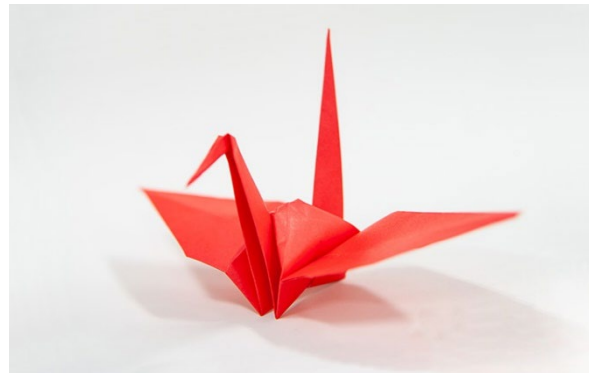
Figure 14 Finished Origami crane

1.2 Indonesia

Second, the Indonesian team shared many things about their country in the video. Indonesia is the largest archipelago country in the world consists of 17500 islands with land measuring 1.919.449km² and consist of 34 provinces. They introduced Toba lake and Rinjani mountain was mentioned as rich nature, and CANDI PRAMBANAN and CANDI BOROBUDUR were mentioned as cultural heritage. Their video also contains other different pieces of information regarding Indonesia such as food and their national sports.
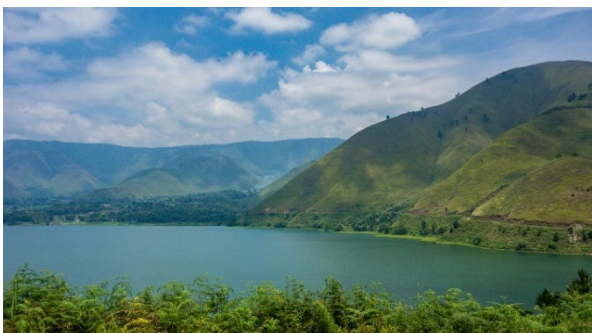
Figure 16 Toba lake in Indonesia

Figure 15 CANDIBOROBUDOR in Indonesia

1.3 Korea

Third, the South Korean team introduced K-pop which is a genre of music introducing in South Korea. Especially, they introduce specific artists BTS which are the world-famous star in K-pop. Their name indicates the group's desire to block out stereotypes, criticisms, and expectations that aim at adolescents like bullets. In the session, we listened to "Butter" a recently relished song of BTS.

Figure 17 BTS: Bulletproof Boy Scout

1.4 Philippine

Fourth, the Philippine team used a quiz format to tell the audience about the Philippines. It was a quiz contest with a time limit. There are many questions related to the Philippines. One of them was a quiz about Manny Pacquiao who is a Filipino boxer. He is one of the greatest boxers in the world and is loved by many Filipino people.

Figure 18 Manny Pacquiao

1.5 Thailand

Fifth, the Thailand team gave a presentation about Samui Island. It is located on the east coast of Thailand and with an area of 228.7km². The island has a dry season in February but is warm and humid for most of the year. The Chaweng Beach and Lamai beach is known for a famous spot in the Samui island. Chawen beach is

Figure 19 Samui Island in Thailand

the biggest beach and is always busy. On the other hand, Lamai beach is quiet and not busy.

1.6 Vietnam

Finally, the Vietnam team introduced Vietnam by showing their video. They mentioned Halong Bay, a UNESCO world heritage site and popular destination in Vietnam. It is located in Quang Ninh Province and its name Halong means descending dragon. They consist of some islands with a dense cluster of limestone. Tourists usually enjoy cruises and cave exploring.

Figure 20 Halong bay

Thanks to the ice-breaking session that gave us a little knowledge about Asian countries. It was also a time to get to know each other. It helps us to concentrate on our works and eventually helps us to enjoy this program.

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2. TALK SESSION WITH PAST PARTICIPANTS

Date: 2021/8/30 (Tue)
Lectured by Dr. Mondheera Pituxcoosuvarn and Dr. Natthawute Sae-Lim
Reporter: Manta

In the first day, two past participants told us about their experience and some messages.

(1) Dr. Mondheera Pituxcoosuvarn (Assistant Professor of Information Science and Engineering @Ritsumeikan University)

1   About her experience

She participated in JAYSES 2010, it is when she was 2nd year student, and participated in JAYSES 2011 unofficially. After that, she took 1-year exchange program with Osaka university. In addition, she came to Kyoto university and got Master and PhD there.

2   About her major

During her master and PhD, she studied about MT, which means Machine Translation. She conducted Field study in KISSY.

The first problem is Participation Imbalance. In this program, one purpose is to find the way to communicate in the group consist with different-language-based members. She examined what language they should speak and what MT they should use.

Another one is Cultural-based Misunderstanding. When we use MT, some translation is not suitable. The reason is we have each cultural background. To solve this, she invented the system that judges the similarity between the word in first language and the word translated directly to another language by using image analysis.

3   Research at Ritsumeikan university

Now, she is at Ritsumeikan university and conducting research. One of her themes, which is under influence of corona pandemic, is to design Brainstorming and Design Workshop on VR. It is helpful to communicate oversea, so she is doing field research now. Another topic is developing Intelligent Dance Teacher. It analyzes someone's pose and compares, finally gives feedback from teacher to student. Her current theme is not only these 2, but she is also doing research about MT and some other topics too.

4   Last message

Be an explorer – According to her, we should become seekers of knowledge. There are many cultures, country and so on. Regardless of the issue is academic or not, we should face to many kinds of challenges and try to overcome. It's important to create new thing!

Pursue your dreams (especially for female student) – She has a child and research. She told us, do not give up our dream because of cultural background like female does not work. It's not easy, but she is doing.

(2) Dr. Natthawute Sae-Lim (Data Scientist @Yahoo Japan Corporation)

1   About his experience

He is participant of JAYSES2011 held in Thailand when he was 4-year undergraduate student. And he experienced a software engineer at Thomson Reuters. He had to work in intercultural environment and learned a lot of things. This was also the timing that he found the interest and decided to study more about software engineering.

One of the biggest problems to come to Japan to study is get appointment to professor, he explained. He utilized the connection that he got in JAYSES and came to Japan.

2   What is PhD?

He explained us what PhD program is. He compared human's knowledge to a circle. What we learned in our high school is base of everything. In Bachelor, we expand our radius of our knowledge and deepen our major a little. Through Master and start of PhD including reading some papers, we'll reach human's cutting edge about our specialty. Then, in PhD, we push out this cutting edge.

PhD life's Pros and Cons is as below.

Pros
- We can get a passport for academic career – To become professor, Dr. is required
- We can gain systematic thinking – It is helpful that we can judge the "fact" overflowing around us
- Travel around the world – Of course to study!
- People call you Dr.

Cons
- Very Stressful – Especially Impostor syndrome is a common one, this is caused by feeling that we are behind others (most of our classmates have jobs, some have their home…)
- Pressure – People around you contact you like that you know everything because you are in PhD

Then, if you get Dr.'s license, you have mainly two choices – Academia or Industry. He showed us the difference between them. One of the most basic one is what is value. In academia, your work is to find or make new knowledge. However, in industry, our value is decided how much your products contribute to our company. In addition, we have more freedom but less work-life balance in academia and these properties are opposite in industry.

3   About Software Engineering

According to his story, workflow of Software Engineering is as below.

Requirement Engineering → Software Design → Software Development → Software Testing → Software Maintenance

It is a study on how to make good software efficiently. It includes localize bugs automatically and correctly, gathering and mining data, reviewing codes and so on.

In the closing stage, he told us what he is doing now in his company Yahoo! JAPAN. His goal as the member of Science department is to improve Yahoo!'s services using data science. He showed some examples and explained his responsibility.

4   Final message

1. Try to know what you want to go – talk to many people, read many books, and watch many movies
2. Be open to opportunities – Everything around us can change in future. Not be close in your narrow world
3. Enjoy the moment

3. JAPAN INTERNATIONAL COOPERATION AGENCY(JICA) VIETNAM

Date: 2021/8/31 (Tue)
Lectured by Mr. Shimizu
Reporter: Narumi

We had an online presentation from Mr. Shimizu via zoom on August 31. He works for JICA Vietnam, and he told us about what they are doing for Vietnam.

3.1 Overview

JICA (Japan International Cooperation Agency) is an independent administrative agency which supports developing countries and carries out official development assistance (ODA). JICA Vietnam is one of the branches and they work for Vietnam in many aspects.

Figure 21 JICA's logo

3.2 What challenges Vietnam face?

We had discussion about challenges Vietnam is facing in groups, Vietnamese mainly giving us ideas about that. And we listed problems: transportation, air pollution, education, pandemic of COVID19, and so on.
Then we heard about three pillars for the cooperation:
1   Economics Growth
2   Response to Fragility
3   Strengthening Governance
And they tackle problems with two ways: financial cooperation and technical cooperation.

3.3 What is "Sustainability"?

As JICA support countries, they think "sustainability" important. In other words, they don't think they just solve the problems is enough for cooperation, but they think to make the countries be able to solve their problems by themselves is important.
They mainly consider four aspects for sustainability:
1   Technically applicable
2   Economically feasible
3   Environmentally sound
4   Culturally acceptable
and make their projects as Vietnamese can keep solving the problem after the supports are finished.
JICA think their projects not only "project for Vietnamese people" but also "project with Vietnamese people".

3.4 About his job

Answering the question, "Why did you choose the job though you were an engineering student?", he told us about his career. He studied civil engineering, and after graduated from university, he entered private company and work at water sector for seven years. Then he changed his job to working at JICA, because he wanted to work for overseas where face more serious water section problems than Japan.
Through his JICA experience, he found social issues are important. So, he has such presentations and tells engineering students the importance.

Reference:
[1] Home Page of JICA (about Vietnam). https://www.jica.go.jp/vietnam/english/index.html

4   KOPERNIK JAPAN

Date: 2021/8/31 (Tue)
Lectured by
 Ms. Tengeji
Reporter: Takumi

Figure 22

4.1 Overview of KOPERNIK

　　KOPERNIK develops, verifies, and spreads innovative technologies to reduce poverty. The places in the developing world where aid is hardest to reach are known as the "last mile," and KOPERNIK helps people living in these places to solve their problems and become self-reliant. The focus of KOPERNIK's activities can be divided into five categories, as shown in figure 24.

Figure 24 Where KOPRNIK works

Figure 23 KOPERNIK's 5 Focuses

4.2 KOPERNIK's Mission and Visions

Mission for today

"We are finding what works to reduce poverty by experimenting with potential solutions that address common challenges facing people living in the last mile."

Vision for tomorrow

"We seek a world where disadvantaged people living in the last mile can realize their full potential and enjoy a dignified life, free of poverty."

4.3 KOPERNIK's Activities and Examples

　　KOPERNIK's activities can be categorized as shown in figure 25. The main activities are "Lean Experimentation" and "Direct Community Support".
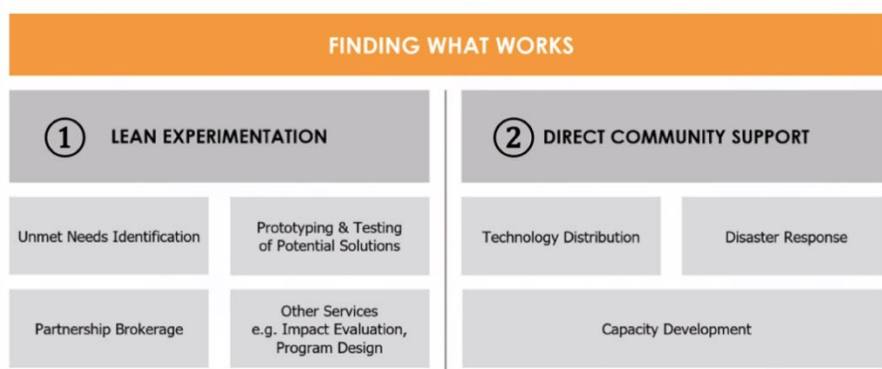
Figure 25 Activities of KOPERNIK

4.3.1 Lean Experimentation

"Lean experimentation" is a characteristic activity of KOPERNIK.

"Lean experimentation" approach means that they rapidly test potential solutions in real contexts, in order to determine their potential to address a particular challenge before large investments are made.

As shown in figure 26, their focuses are idea generation, prototype testing and pilot testing. they think implementation as a part where they help or encourages others.
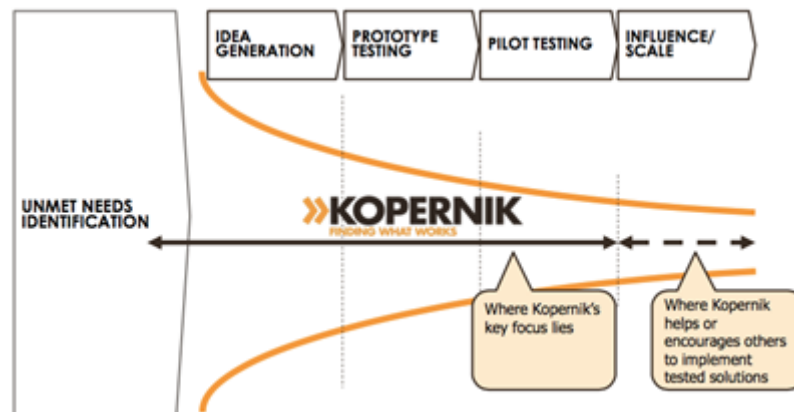
Figure 26 The innovation funnel

Example: Applications for Tuberculosis Patients

In Indonesia, many people were suffering from tuberculosis, but due to side effects and lack of knowledge about treatment, many of them stopped treatment. As a countermeasure, an application for cell phones was developed and KOPERNIK and Otsuka Pharmaceutical tested its impact on improving patients' adherence to TB treatment. As a result, 22% of TB patients used the app continuously for more than three months. The app retention rate was slightly higher than the industry average.

Figure 27

4.3.2 Direct community support

They work with their partners to help on a large scale by sharing the results of the research done by KOPERNIK. These activities can be divided into three main categories which are technology distribution, disaster response and capacity development.

Example- Distribution of solar-powered lighting

People living in the last mile depend on kerosene lamps, which emit toxic smoke and are a fire hazard. As a solution, KOPERNIK and signify

Figure 28

distributed solar home systems and solar street lights in North Sumatra, East Bali, Central Kalimantan and Maluku. 1,184 technologies were distributed. And people in Central Kalimantan say as figure 29.
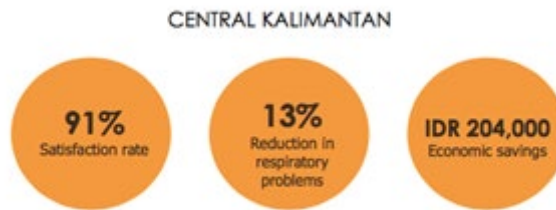
Figure 29 Voices in Central Kalimantan

4.4 From Reporter

Thank you Ms.Tengeji for a very nice presentation. I realized that KOPERNIK's activities are making a great contribution to the people in the last mile. It made me think that I would like to help such people in the future. What is written above is only a small part of those activities. I encourage readers to learn more about their activities from KOPERNIK's website mentioned in the reference.

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5 HITACHI, LTD.

Date: 2021/9/1 (Wed)
Lectured by Dr. Teramoto, Mr. Higuchi and Mr. Chiba
Reporter: Yo

Figure 30

5.1 Basic information

Hitachi, Ltd. is a production company from household appliances to financial systems. This year, we had a discussion session with the Ho Chi Minh City Metro project, which belongs to its mobility sector.

Hitachi, Ltd. contributes to Ho Chi Minh City Metro project line 1's construction. It plays a role as CP3 which is an Electrical and Mechanical contractor. Hitachi supplies rolling stock, signaling systems, track work, and some other equipment. The first cars arrived at Long Binh depot in October 2020. It is now scheduled to open in late 2021 or in 2022.

Figure 31

5.2 Presentation

Dr. Teramoto -Director of Japan Infrastructure of Hitachi, Ltd.-, Mr. Higuchi -Engineer of Japan Civil & Track Works of Hitachi, Ltd.-, and Mr. Chiba -Engineer of Japan Power Supply & Traction Power of Hitachi, Ltd.- presented about their stories on Ho Chi Minh City Metro project.

Dr. Teramoto explained the role of Hitachi, Ltd. in the Ho Chi Minh City Metro project. First, he introduced the project. Then, he showed us how each part of work relates to each other and how each work is needed for the train to be worked. Lastly, he made an introduction for the next two speakers. We learned that there is a lot of work to make a railway, and we also learned how important the work which two speakers were going to talk about is to prevent accidents.

Mr. Higuchi deeply talked about rail construction after Mr. Teramoto. Since there are underground and elevated parts, he showed us each construction process through many pictures. We couldn't virtually visit the real site of construction due to a lockdown in Ho Chi Minh city unfortunately, but we could see the history and processes of the construction instead. We learned processes not only for constructing rails directly but also processes to make sure that construction goes well. We especially saw many pictures to check whether each process went well or not. We also learned that there are many limitations in each process of underground construction when we compare with its elevated part.

Mr. Chiba deeply talked about the overhead contact system's construction. Hitachi had asked the civil constructors to install some equipment before Hitachi started to construct their part. Therefore, they had a checking process for the installation first. There are processes that civil constructors have great responsibility for the project. We also saw many appliances to support each other. We learned that each process is responsible for other processes.

5.3 Q and A session

Q1. As technology advances, the rail system will be developed and there will be a time to change the railway system. Is there any technology to replace or update an old railway system to a new railway system?
A.   Since railway systems are used for more than several decades, technology for updating is very important. For minor changes, by transferring technologies, local engineers can work on them, and we try to do it in that way. For great updates, we can make it as projects and work on it.
Q2. What were the causes and their effects to this project for the delay of this project?
A.   There are many reasons including political reasons and some others.
Q3. Because of the high temperature, rails could be snaky. What kinds of techniques do Hitachi use to solve these problems?
A.   By rail stress analysis, we estimate the points that the stress excess. (He showed us a graph.) We install rail expansion joints which are called REJ which are not connected by rail welding but sliding to ease the stress. It is an essential tool to avoid such a problem.

Q4. Why did you choose this career?

A.　You might wonder why I chose to change my career from robotics to elevator system, but it is clear: in order to develop safety analysis on robotics especially functional safety, which is a safety system including software. When I was working on it, I realized that it is a very important issue not only in robotics but railways. Therefore, to utilize my knowledge, I choose the career. I was also very interested in heavy industry.

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6 LECTURE: DEVELOPMENT AND NATURAL DISASTERS IN ASIA

Date: 2021/9/2 (Thu)
Lectured by Dr. Hiroshi Takagi
Reporter: Ukyo

6.1 Introduction

This lecture focuses on a flip side of development, which could induce negative influences on societies as a consequence of natural disasters. "Disaster management" is not often addressed in the development policies of Asian countries. However, success of development should be examined not only from economical but also from sustainable point of view. Planners and engineers should bear in mind how your plans and projects can be harmonized with surrounding natural environment and society, foreseeing a future possible disaster event.

6.2 Natural Disasters in the world

During the 1900 - 2021 period, major natural disasters that caused over a few thousand deaths have occurred at least 61 times in the world. In other words, a great natural disaster happens anywhere in the world once two years. An earthquake has most recently happened in Haiti in 2021. We are very worried about COVID-19 now but don't forget about natural disasters.

In the breakdown of natural disasters that happened in the world, 80 - 90% of the deaths were caused by earthquakes, tropical cyclones and tsunamis. Of these, about half are earthquakes. In addition, about three quarters of the victims of disasters are concentrated in Asia.

Looking at the left picture of figure 32, it shows the number of disaster events including minor ones 1970 onward. We can see the increasing trend of disaster events till 2005 and the decreasing trend from that year in this figure. We have to consider the backgrounds and the reasons of both two trends. In the right side of figure 32 on Japan, there were many casualties of coastal disasters until around 1960 and from that year, the count dropped down to almost 0. These good trend in the figure 32 are explained by development of infrastructure against disasters which keep the damage at a minimum and economic growth which intense the implementation of the development. However, we still have another issue like 2011 Tohoku tsunami and earthquake in Japan. It can explain a sudden rise in the graph 2. It means that we can control minor disasters but we can't prevent very huge disasters that we've never thought and it causes a large number of fatalities.
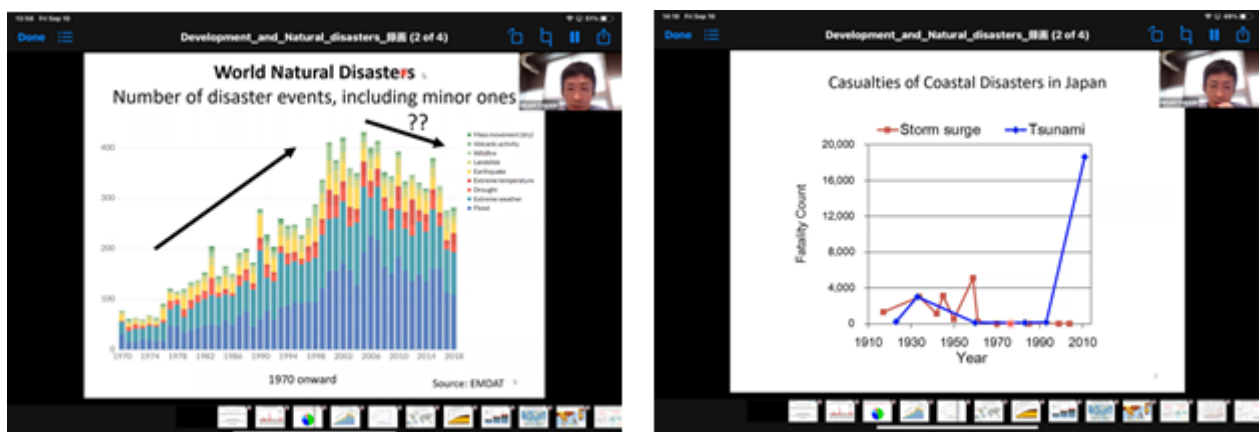

Figure 32

6.3 Factor causing natural disasters

There are many factors causing natural disasters, not only one factor, and these below factors have strong and also complicated relationships each other. Main four factors are described below, Population increasing, Living in coastal areas, Economic growth and Land subsidence.

6.3.1 Population increasing

Now, in 2021, The population in Asia is the most in the world but the population would reach the peak around 2050 and after that, it would decrease slowly. In contrast, Africa is the biggest driving region for population increasing and it may outnumber Asian population by the end of this century. On the whole, the population in the world is dramatically increasing. Why is it a problem? We think about this in 6.3.2, 6.3.3 again. As written above, some factors affect others.

Figure 33

6.3.2 Living in coastal areas

Next factor is about the place we are living now.
Looking at the figure 34, it is a map of the South East Asia and shows population density in Asian countries by light and shade of brown color. What we can find from this figure is population density is concentrated in coastal area than towards the center of the land. For example, in Vietnam, very narrow part of the region in coastal area is concentrated from the right extended picture in the figure 4.

According to a research, 65% of the cities in the world with a population over 2.5 million are located in coastal areas. That is because of the economic benefits, coastal fisheries, tourism and recreation, human settlements are often more concentrated in the coastal zone than elsewhere. As a result, the average density of people in coastal regions is 3 times higher than the global average density.

Figure 34

Back to the figure 34, there is an exceptional region called delta area which is the below part in Vietnam. Delta area is a flat plane region that has many river channels, no mountains and convenient place and many people historically inhabit in this area but this area is disadvantage to disasters. One reason is sources of disasters. The figure 35 shows that Asia is a highly prone to both earthquakes and typhoons because these sources are concentrated in Asia. It's an unfortunate factor.

Figure 35

6.3.3 economic growth

Third factor is economic growth.
Without 1998 depression or 2017 depression world economy crisis, GDP per capita is well increasing overall that is clear from the figure 36. It is actually good thing. However, economic growth accelerates increasing the population growth and its population is not equally distributed. This is to say, the population is concentrated in the risker-to-disaster area.

This concentration causes the difference between rural area and urban area. Rural areas have small humble house, like easily collapse but these areas are reducing in Asia or located in mountain area. Urban area, for example in Japan, we have sophisticated buildings considering earthquakes and placing a strong foundation. This area
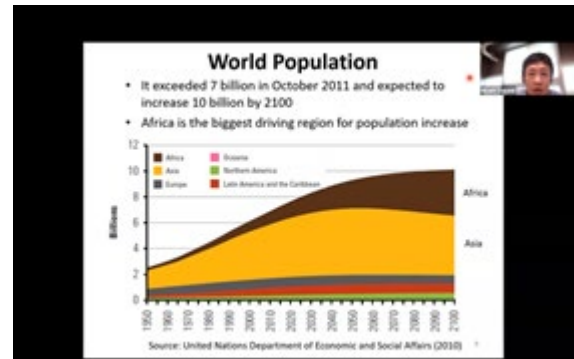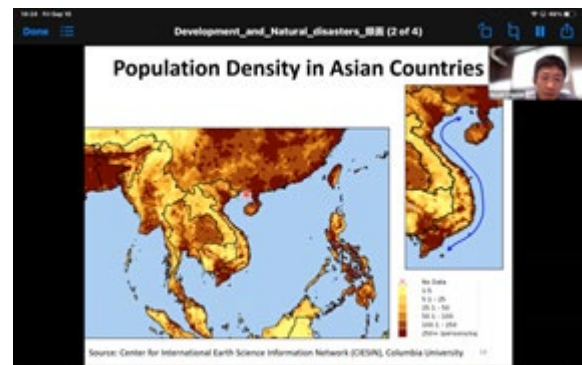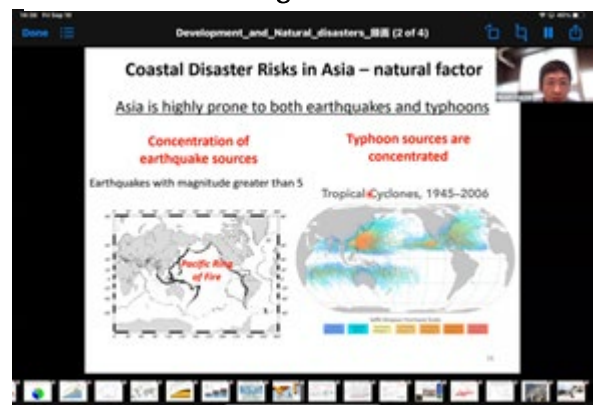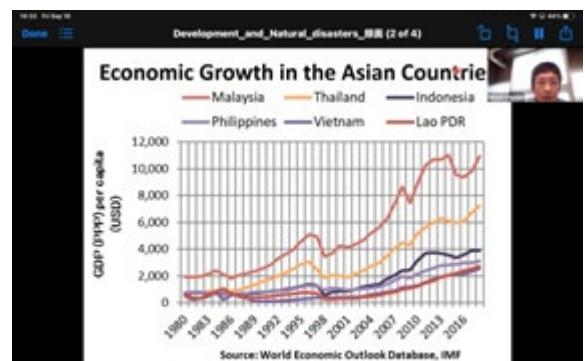

Figure 36

should be so safety against disasters. Big problem is non-resilient urban area which mean that it is located in coastal area but the development is not enough so the place is vulnerable to disasters. This area is increasing very rapidly in Asia. It is the most difficult problem and hard to solve.

6.3.4 Land subsidence

Final factor is land subsidence.

Nowadays sea levels increase in Indonesia and some countries due to the global warming and affect delta areas explained above section due to low elevation. And sea-level rise is one of the causes of flood but it is not only cause of flood. We cannot explain flood only by sea-level rise, for instance, 2017 Jakarta coastal flood when the tide was not very high but people got big damages.

There is another contribution, that is the land subsidence which means steep declined sinking. The figure 37 shows the land subsidence in Asia cities. In Japan's case, we experienced the land subsidence from 1920 to 1970 but now somehow successfully suppress the sinking. On the contrary, in Jakarta, very steep sinking still continues now. It's a really problem. Some people in Jakarta live there which is lower than the sea level. It makes the damage of floods more serious.
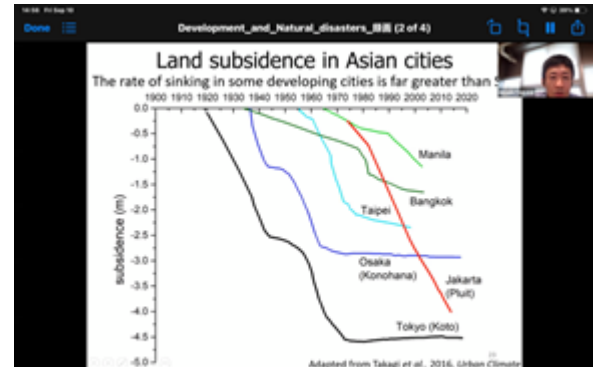
Figure 37

6.4 Recovery and preparedness

Of course, the government recognized the problem on the land subsidence and attempt to build very high dyke. Although it's not so good to just building dyke with no thinking such as in response to precious disaster, no science, no investigation or no engineering. Only high is not good because it probably can be too thin compared with the height or be unstable. Actually, what we concerned happened in 2019 Jakarta, the dyke collapsed in that case.

Other cases include Ishinomaki City after the Great East Japan Earthquake and Tsunami. In that disaster, 1701 houses out of 1950 (87%) was washed away by the tsunami exceeding 5 meters. The town still bear a scar from the disaster and would never completely recover as it used to be. The total cost for the recovery and the reconstruction is 1,227 billion yen which is equivalent to about 20 years of the city's total budget. If we prepare well, we may be able to avoid such a huge damage. The figure 38 shows the importance of the preparedness. Cities could be instantaneously demolished by just one impact of natural disaster and may be never recovered without the preparedness.

Figure 38

Some international organizations define the disaster preparedness like below.

・"Disaster preparedness refers to measures taken to prepare for and reduce the effects of disasters. That is, to predict and, where possible, prevent disasters, mitigate their impact on vulnerable populations, and respond to and effectively cope with their consequences." - IFRC.

・"Disaster preparedness involves forecasting and taking precautionary measures prior to an imminent threat when advance warnings are possible." - UNDP

・"Knowledge, capabilities, and actions of governments, organizations, community groups, and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions." - UNISDR

The common idea in these above sentences is to imagine. From now on, natural disasters that we've never seen will come so we have to "imagine" an unprecedented disaster in the future.

VI. DISCUSSION AND PRESENTATION

1. GROUP A

Topic: Accelerating global education
Members: Tem, Takumi, Hieu Tran, Helen, Tent, Mariz

1.1 Background

There is an education gap in the world, and it's getting bigger by the hour. According to the report from UNICEF, it can be said that South Asia has more uneducated children compare to any other country in the world. Poverty and education have a great deal to do with each other. Many people who were poor due to lack of access to adequate education can become poor again, creating a negative cycle. This is a complex issue with many factors and it is serious problem than we think. Thus, we decided to attach it. We have two proposed solutions to solve this problem.

Figure 39 The poverty cycle [1]

1.2 Solution

1.2.1 Community capacity and educational supports

The first one is community capacity building and educational supports. Our NGO plan to provide training and a workplace for less fortunate people. The education and training provided will be done by representatives from partner companies which means that individuals were provided a variety of education from each company and find what they are interested in.

To be specific, a consultant platform wherein people from other countries, especially developing ones, could consult with professionals with advanced Research and Development (R&D) to enhance their local technologies. Also, there is an online class community in Asia where you learn about cultural differences, especially for food and culture. For instance, cooking lessons for beginners and an international forum where you can do a language exchange.

1.2.2 Collaborate research project and project implementation between partner institutions

The second is collaborating research projects between partner institutions. Through collaboration between institutions, we can facilitate knowledge transfer through joint collaborative research and project implementation. Also, all the institutions which have been joined have access to established institutions where they can share their research findings. This will lead to each other's development of technology.

1.3 Purpose

Here are the three purposes that why we have to run our organization.

1.3.1 Making opportunities accessible

Enrichment of technical skills through training programs, publicly available lectures for selected topics, and posting job opportunities are the advantages while running our NGO. What these have in common is that they provide many people with the opportunity to learn. These will provide Asian people more chance to learning

1.3.2 Promoting technological advancement

By learning High-tech infrastructure in a "learning-by-doing" and replication, they could make the technology development to the local region. In addition to that outsourced knowledge, materials and goods, and foreign investment supplement necessary skills for the local people.

1.3.3 Fostering cultural exchange

Collaboration with the local people makes the knowledge transfer easier and be accepted by the community. Also, this NGO gives an opportunity for enhanced communication skills for people who participate and strengthen relationships between partner countries.

1.4 Strategies for ensuring sustainability

1.4.1 Activities to grow the network

In order to strengthen our network throughout Asia, we are enhancing our collaboration with partner institutions and students, as shown in the figure below. Our partner institutions and students are not limited to any particular country. Giving equal opportunities to people from any environment is one of our features.
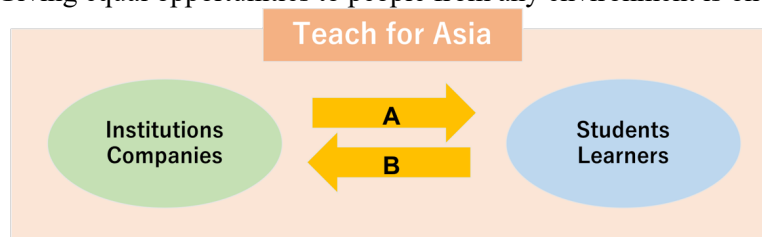
Figure 40 Our role between students and partner institutions

・**Part A** (Support for Institutions and Companies)

We support our partner institutions in attracting higher-quality talent. Our partner institutions will find it easier to share their research results and collaborate.

・**Part B (**Support for Students and Learners**)**

We support the participation of students and learners in internships and research activities. Participants can gain more experience and more easily join collaborative research.

1.4.2 Findings

①**Sponsorship**

Sponsorship may take the form of cash, free or discounted products, technical support, etc. Sponsorship from established institutions can help boost our advertising & marketing progress as well as supply us with the revenue needed to run our projects.

②**CSR funding**

CSR funding improves corporate public image and reputation. Some corporations with similar CSR goals as our cause: Otsuka holdings, Schneider Electric, etc.

③**Private Donors**

Certain individuals with high net-worth such as celebrities and politicians may be able to provide us with some form of donation towards causes they feel strongly about. This could benefit their personal branding and may generate public interest to donate to the cause.

④Philanthropic Foundations

We can provide funding to individuals and NGOs working on similar causes as their own. Some grant-giving foundations with similar cause as us: William & Lily Foundation, Rockefeller Foundation, Gordon & Betty Moore.

1.5 Conclusion

We focused on the relatively low level of education in Asia. In other words, there are children in Asia who do not have access to proper education. We are proposing an NGO to address this issue. NGOs have three main activities: making education available to all, promoting technological innovation, and promoting cultural exchange. We believe that our NGO will help to achieve a peaceful one Asia.

Reference:

[1] *STUDENT LABOR ACTION PROJECT*, "Breaking the Poverty Cycle", http://studentlabor.org/poverty-cycle/

2. GROUP B

Topic: Connecting the world for the better education
Members: Feldy, Harry, Yo, HuuKhai, Manta, Narumi

2.1 Current situation

In the current situation, we think there is a cycle of inequality;

First, there is no access to quality education. Next, if they don't get enough education, they cannot get skills or knowledge and it leads them not to get a good job. Then they cannot earn much money, and the lack of money makes their children don't have access to quality education.

In such a way, the cycle is repeated again and again.
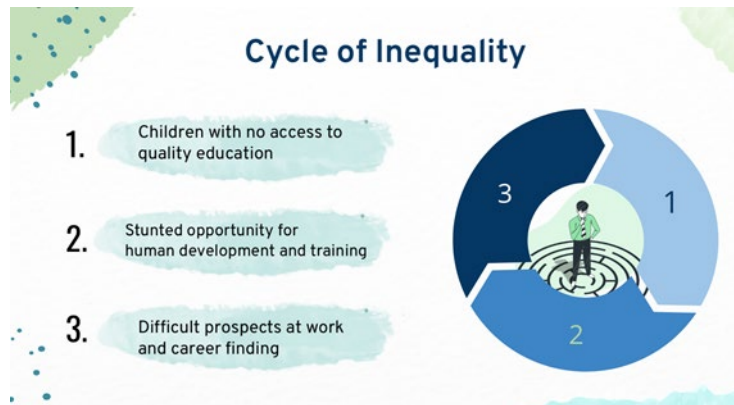
Figure 41

To stop the cycle of inequality and solve many social problems in the world, we decided to focus on education.

2.2 Problems

We listed problems around education concretely;
- ・some children don't have access to education
- ・rich-poor gap widen
- ・low wages for teachers
- ・lack of learning equipment
- ・students with difficulty on self-studying

To tackle these problems, we thought of our NGO to connect people in a proper way.

2.3 Solutions

The NGO we planned is "Ara-AraLink".
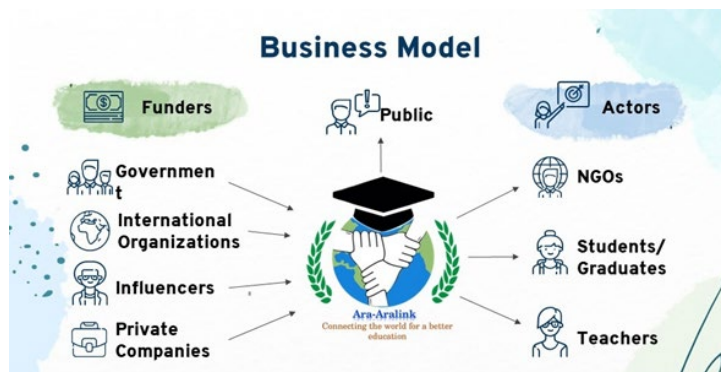
Figure 42

Its business is focused on connecting people and NGO, people and educational services and so on. Here we show our model (Figure 42).

Our solutions are divided as bellows:

・NGO Service

There are many NGOs that support education systems from each point of view. As we mentioned above, our main way is to connect someone to somewhere. In NGO service, we gather information and introduce proper ones to people who need to be aided.

In our presentation, we introduce two types of NGO existed in the real world - Lean Experimentation and Demo Day. The first one exists to aim that new educational style into education sites experimentally. The second one is to insist on the actual situation of education sites and improve them. Figure 43 shows some examples.

Figure 43

・Teacher Service

In many countries, the environment surrounding teachers is not so good. Many governments are trying to improve the quality of courses by changing their concepts from teaching knowledge to providing a method of thinking. However, current teachers working at school have not experienced such a teaching method. Therefore, they are struggling. To improve this situation, we plan to provide some teacher-training courses which are suitable for modern educational policies. It includes an online course which is available in open source.

By providing proper training, the number of teachers and quality of teachers are expected to improve. If that happens, the style of courses will change for the better and the government can foster the change of education.

・Student Service

In this region, we plan to organize some annual events to link students with businesses and universities. There already exist some events which have the same purpose, here we show in Figure 44.

Figure 44

Same as the other two main regions, our work includes introducing these existing events.
Also, free massive lectures and cultural discovery programs are planned. All of these programs are based on thinking that world students do not have enough opportunities, as we introduced in the Problems part. Free programs will contribute to decreasing the gap between rich and poor, we believe.

2.4 Conclusions

Our big goal is to end the Cycle of Inequality. By providing free ways to get support, we make 'Link' and try to achieve our goal.

Figure 45

3. GROUP C

Topic: CHASE ~ Cultural Heritage of Asia: Sustaining and Empowering ~
Members: Jonathan, Mek, Samson, Yoshi, Yuki, Zei

3.1 Introduction

There is still a gap between people of different cultures despite the growth of SNS such as Facebook and Instagram. We would like to solve this problem. Therefore, we focused on tourism. Before Covid19's pandemic, travel has become more affordable and more accessible thanks to the development of technology. And after the pandemic, the number of travelers will be higher than before, and the purpose of travel will be more diverse. In addition, people are visual learners. We tend to remember what we saw and what we experienced firsthand.

So, we propose to establish an NGO to solve this problem through tourism, its name is 'CHASE'.

3.2 Primary Goals

- To exhibit, restore, preserve, and investigate the tangible and intangible cultural heritage through cultural exchange with both the local people and visiting public
- To focus on community empowerment and involvement: for the community, by the community through innovative strategies (digitalization of promotion, economic diversification)
- To better help the promotion of United Nations' Sustainable Development Goals (SDGs) of 2030

3.3 Plan for Launch

Our plan for launch is divided into 6 phrases.
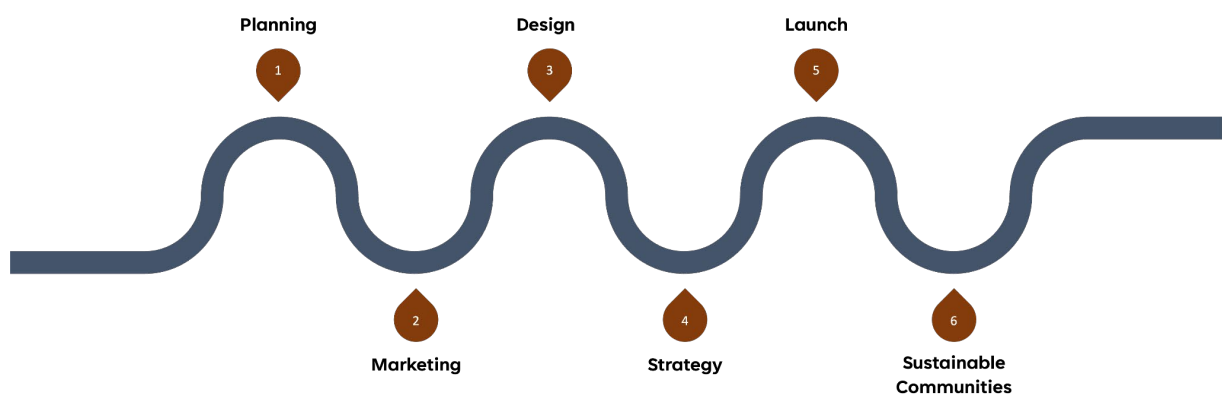
Figure 46

1. Planning
   - Involvement of Local Stakeholders
   - Immersion to the Community
   - Prioritization of Indigenous
2. Marketing
   - Marketing plan
   - Distant Promotions (Academic, Industries)
   - Development of Tourism Catalogue
   - Cultural Showcases and Performances (Dance, Culinary Displays, Fashion Shows)
3. Design

- Renovation and Rehabilitation of Existing Structures
- Ecotourism
- System Implementation
- Multi-stakeholder Involvement
4. Strategy
   - Growth in the number of Collection/Showcases
   - Stand-alone Establishment
   - Local Community Involvement
5. Launch
   - Sustenance of the Local Museums
   - Tourism Site
   - Travel Destination
6. Sustainable Communities

3.4 Areas of Focus

3.4.1 Identification of Area

Our initial focus area is Southeast Asia. We will select the area that satisfies the following items.
- Revitalization of the Existing Culture
- Identification of not well-known Cultures
- Capacity to Adapt to Health-related issues
- On-site Surveys (access, mapping what needs to be developed, etc.)
- Build relationship with local community

3.4.2 Cultural Heritage Tourism

We came up with the following example.
- Religious Tourism
- Culinary Tourism
- Ecotourism
- Historical Parks
- Exchange with Locals/Indigenous People
- Indigenous Family Immersion
- Economic Diversification (Establishment of Businesses)

3.4.3 Community Development Models

We thought developing the selected area's community is also important as well as what we mentioned above. Therefore, the following items should also be considered.
- Iterative Approach for Development
- Sustainable Preservation and Interpretation
- Modernization of Local Cultures Promotion
- Gradual Development to Ensure Effectivity
- Local Growth of MSMEs

3.5 How we get to the goal

CHASE is a team of specialists and social workers. "Social workers" are those who communicate with residents and local governments. Through the interaction, we try to find out the community's assets and demands. After that, we suggest development models for each community.

Our main topics in the discussion were the five below. Those formed the basis of CHASE's activity.

　　1. what the residents offer
　　2. what CHASE can do
　　3. feasibility
　　4. benefits for the local communities
　　5. sustainability

First of all, we want to inspire a lot of people to share their assets from a long time ago. We also want to provide economic diversity to local communities. We hope our project will be stable so that the community can grow in the long term. One problem here is how to run our projects without harming the heritage. That may be our biggest challenge.

3.6 Our pioneer; Intramuros Administration (IA)

This organization changed a once-forgotten area into a vibrant community. It taught us that the past and modern society can be together in harmony.

3.6.1 About Intramuros

Intramuros is the oldest walled city in Manila, built by Spanish settlers. The area is a part of the national heritage.

Intramuros once used to be the biggest European city in Asia. However, in 1945, the Battle in Manila reduced the metropolis to ash and rubble.

Intramuros was a trace of Spanish colonization so many people wanted to forget about its history. Against the movement, visionaries established the Intramuros Administration (IA) in 1973.

Figure 47 Scenery of Intramuros

3.6.2 Current situations in Intramuros

IA's concept model was sustainable cultural tourism lined with Filipino's compassion and creativity. The team didn't see the city as just a photogenic spot. They envisioned it as a place to feel the past. They viewed it as a symbol of the nation which has overcome the difficult time.

3.6.3 Tourism in Intramuros

Intramuros has a rich history and culture. IA has promoted their values using tourism. You can find various kinds of tours such as ecotourism and art tourism.

Another big trait of the city is the flexibility for the ongoing pandemic. Many institutions have shifted their programs to online.

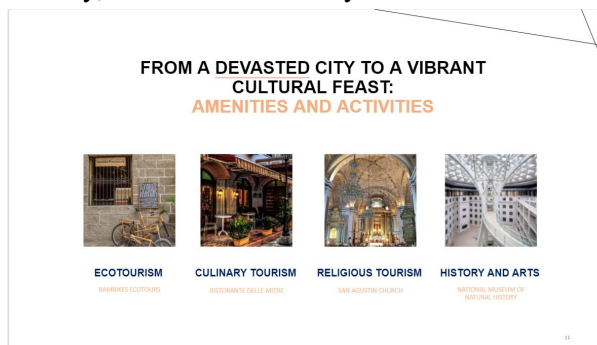Today, Intramuros's history and its value are

Figure 48 Various Tourism

Figure 49 Online Programs

understood well among the whole country.

Intramuros is no longer a forgotten area now. The city is breathing again as Filipino's identity.

3.7 Conclusion

We suggest a private non-profit NGO, CHASE. Our vision is to conserve historical, cultural treasures through tourism. So, CHASE focuses on the sustainable establishment of cultural-rich areas. CHASE offers mutually beneficial community development models, just like IA. Furthermore, we want to help the district to gain financial stability.

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4. GROUP D

Topic: What to do when a disaster is occurred during a pandemic
Members: Charm, Seth, Nix, Ryo, Luffy

4.1 Introduction

The recent outbreak of the coronavirus has caused a lot of anxiety among people, and this has led us to think about what measures should be taken in the event of a disaster during this situation. To concretize the problem, this time we focused on the flooding issue and how the government should implement countermeasures and how the people should evacuate in case of flooding under the corona. Also, we surveyed measures that incorporate new technologies.

4.2 Discussion

First, we searched the flood damage that occurred under the corona in Asian countries. Then, based on the literature, we discussed the measures that should be improved and the technologies and measures that should be introduced. Actually, we found a lot of examples such as Aftermath of Typhoon Hagibis in Japan, Central region flood in Vietnam, Cagayan flood in Philippines and so on. The condition of the people and government officials during these floods was more severe than in previous disasters. Understanding this situation, we decided to propose the following plan.

Figure 50

4.3 Overview of our proposal

At first, we supposed to found non-government non-profit organization which can provide support and community preparedness towards typhoons and floods during the pandemic. Moreover, we named it DDSR (Double Disaster Strategic Response). This organization mainly aim to provide pre-disaster prevention, post-disaster response, and education for disaster measurements.

We divided our activities into three categories based on the timeline to clarify our mission. These are pre-disaster one, and during-disaster one, and post-disaster one.

Figure 51

4.4 Pre-disaster

The first step was to conduct evacuation drills not only for the school but also for residents to provide them with disaster education under the corona as well as disaster knowledge under normal circumstances. We also thought it would be effective to have an effective and quick disaster warning system and to provide shelters with a full range of disaster preparedness supplies such as carton bed.

Figure 52

4.5 During-disaster

In this section, we have categorized the measures into two patterns according to the tragedy of the disaster.

4.5.1 Light typhoons and minimal flooding

In this case, in order for people to feel comfortable in the shelter, it is important to install safe hygiene products and store disaster food. We also thought it would be effective to install a simple waterproof wall to prevent further flood damage.
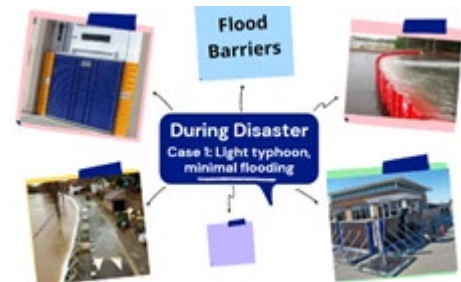

Figure 53

4.5.2 Heavy typhoons and life-threatening flooding

Since long-term sheltering is expected in this case, the installation of public kitchens and more robust shelter facilities will be necessary.

4.6 Post-disaster

In the event of very heavy damage, some people may lose their homes. Therefore, it is expected that temporary housing will need to be set up after the disaster. In Japan, the temporary housing built after the Great East Japan Earthquake is well known, but this is not yet the case in other Southeast Asian countries.

Figure 54

4.7 Long term project

We have also investigated measures that may not be immediately feasible due to the huge costs and long-term construction costs involved. We believe that these measures should be implemented gradually over a long period of time. The following pictures are some examples.

Temporary House Post-Disaster

Figure 55

Figure 56 Water absorbing pavement

Figure 57 Communities with disaster-resilient and environment friendly homes

4.8 Conclusion

In conclusion, we believe that we can reduce the number of victims by spreading the knowledge of disaster preparedness in the corona, filling shelters, and improving the efficiency of disaster information on the Internet in the right order and at the right time.

5. GROUP E

Topic: Providing Alternative to Solve Brain Drain
Members: Deo, Jeanne, Ken, Rina, Hiro, BigShark

5.1 Current situation

Recently, the Brain Drain is the most important problem for all over the world. In the first place, the Brain Drain is "migration of the local and young professionals to other countries." This can be seen in the developed countries. But this problem has serious impact on the developing countries. The reasons of it are below two.

First, the more young professionals go out of the country, the slower the speed of the developing is. And This causes next Brain Drain. That is to say, if the country can't grow much, young professionals will go out of the country.

Second, some young professionals may have an idea that we can work better in the other country as common sense. Regardless of the country has opportunities of working in good condition or not, if they don't know about it, they will go out of the country.

The reason why they go out of the count is below three reasons, job security, income increasing and better quality of life.

First, job security means unemployment rate is less in the other countries compared to the country they live. Less unemployment rate is important for not only local professionals but also the other local people. So, job security is strong push factor of the Brain Drain in all over the world.

Second, income increasing is also important for it. Most people think we want to be evaluated properly. So, if the people think that the salaries are not enough for our jobs, they may be quit the company and they change jobs. And the more money means the better life. So, people want to increase their salaries.

Third, better quality of life is connected to the previous two items. They make the life of the local professionals better. So, the local professionals want to go abroad.

To solving this problem, we think some measures and we decided to the measure which is written below.

5.2 Our Solution for the Brain Drain

Our solution for the brain drain is established a nongovernment organization named "middleman." We imagine the logo of this organization. This is the figure 58.

Figure 58 The Logo of the MIDDLEMAN

In this part, I write about our organization model, our vision, our mission andour objectives.

Firstly, the organization model of the middleman is on the figure 59. We encourage the international companies to teach the technologies they have and to offer the job opportunities and the research opportunities. The same time as it, we approach on the local government to inflastructual development, economic growth

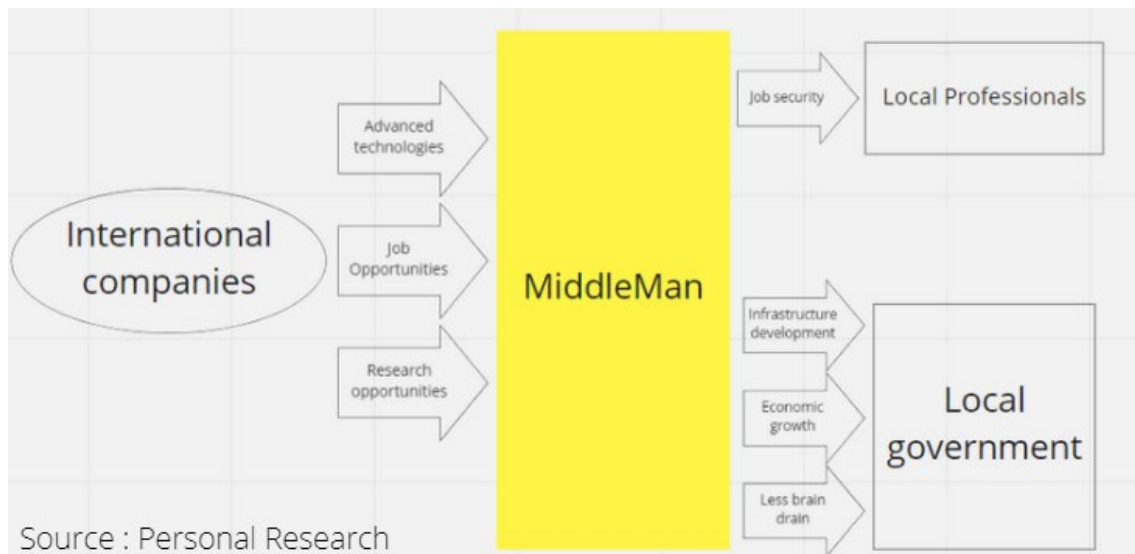and less brain drain. This brings the local professionals job security.

Figure 59 The organization model of our organization

Secondly, our vision is Providing an alternative where locals choose to stay in their country for professional works. Now, the local professionals may think if they want to get a professional job, they have only way to go abroad. So, we provide another way of working in the country and encourage them to choose this way.
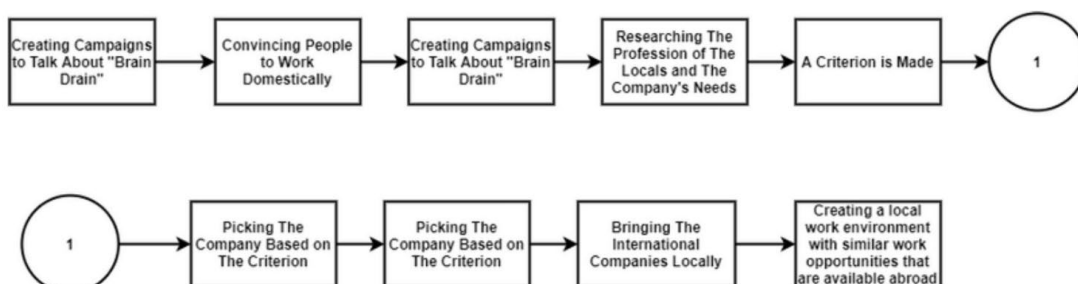
Thirdly, we have three missions. First, we need to unerstand requests from both local professionals and international companies. This is because the international companyies are in the specific countries for the reason of the country has better human capital or more high educated people. Second, we need to remove barriers. For example, legal aspect and infrastructural aspect for international companies and informational aspect for local professionals. Without them, we can't invite international companies and if the international companies are in the country but the local professionals don't know about it, the local professopnals go out from the country. Third, we need to reduce the push factor. The brain Drain is caused by both push and pull factor. But pull factor is in the other countries so we cannot approach for it. So, we need to approach to the push factor. We think push factor is composed unfavorable conditions for the young professionals and high youth unemployment rate. So, we need to reduce these things.

Lastly, we have five objectives. First, we need to create more opportunities locally. Second, we need to connect opportunities available abroad to local professionals. Third, we need to create job security for local professionals. Fourth, we need to provide decent work. These four things are to the local professionals. Last, we need to improve economic growth. This is for all the local people.

5.3 Action Plan

In this part, we write about our action plan. First, I will write about our strategies.

Our strategies are on the Figure 60. With this figure, we write closely about the important point we think. In the box which is located third from the left in upper line in the figure, we write "creating campaigns to talk


Figure 60 Our Strategies

about 'Brain Drain.'" This is important thing. This is because we need to know closely about the problem when we want to solve it. And in the next box, we write "Researching the Profession of The Locals and The Company's Needs." This is important too. This is because if both needs don't meet, the plan must be failure. These two points are important point in our strategies.

Next, we write about our plan diagram (figure 61). And we write detail about researching needs, funding and marketing.
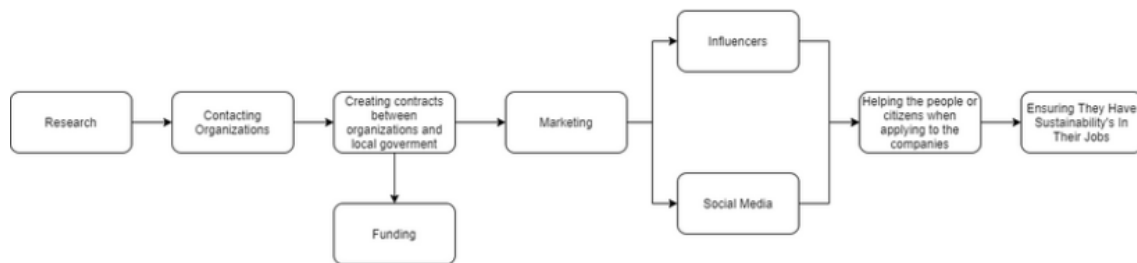
Source : Personal Research

Figure 61 Our Plan Diagram

First, we write about researching need. As mentioned before, we research needs both from international companies and local professionals. This is because the international companies' needs are pulling them from the country. The international companies are in a country which attracts the professionals because the country meets their needs. So, to bring the companies from the country to the brain drained country, we need to know about the needs of the international companies too.

Second, we write about funding. We may get the funding from private company, local government and other non-government organization.

Third we write about marketing. We think we can use influencers or social media for marketing.

5.4 Possible Problem for us

In our opinion, we have two possible problems. First, we have already many international companies in the developing countries. For example, Microsoft, Google, IBM and apple. For this problem, we need to make a partnership with these companies too. And this will help our challenge of the Brain Drain. Second, bringing international companies do not always mean good. This is because people in poverty have little opportunity from our campaign. To solve this problem, we approach the government to let children get higher education or we need to talk citizens through social media.

5.5 Related point to SDGs

In this part, we write about the things which we want to achieve in the future from a SDGs' point of view. That is "1 No poverty," "8 Decent work and economic growth," "9 Industry, Innovation and Infrastructure" and "11 Sustainable cities and Communities." These four things are connected on our strategies because of below two reasons. One is stopping local professionals from going out from the country connects to the economic growth and the sustainable cities. The other is sustainable economic growth saves more people from poverty and leads the country more infrastructures.

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6. GROUP F

Topic: Transferring technology for sanitation
Members: Yo, Ukyo, Nes, Naru, Kyle, Arya

6.1 Overview

The water and sanitation problem is recognized as one of the SDGs goals. Our group focuses on toilets and sanitation problems in the world and plan to launch a NPO named BIOTOILET.

6.2 Current Situation

Now in the world, 2.0 billion people still do not have basic sanitation facilities such as toilets. Of these, 673 million still defecate in the open. It contaminates groundwater or rivers and causes bad diseases such as cholera, diarrhea that kills 432,200 people annually. And there are still other problems, for example, due to no toilets in schools, children can't go to school because their privacy cannot be protected.

You may think that we should build many toilets quickly, but it's not good. If we build toilets in some volunteer projects, they don't know how to use it and how to maintain it in a long term. It leads to breaking toilets and finally nobody uses them. Therefore, just building toilets can't solve these serious problems at all and we also have to focus on education such as sanitation or the importance of toilets.

6.3 Vision and Mission

Our vision is to enhance and fulfill clean sanitation through developing and educating on toilet technologies.

Our two main Missions are to transfer technologies to developing countries, especially from Japan, and to produce an education program to influence students to consider toilets and sanitation more than before. We can contribute to achieve three of the SDGs goals, "SDGs3 : Good Health And Well-Being", "SDGs4 : Quality Education" and "SDGs6 : Clean Water And Sanitation".

Figure 62

6.4 Service

Our service consists of three main products. First, we produce toilets which can be modified into several flush systems depending on the environment. Second, we produce educational books using sanitation related characters. Third, we provide job opportunities to local citizens for cleaning, maintaining, and producing toilets.

Our toilet product image is shown in figure 63. We produce a base toilet first. The product is modified into several types depending on the places that we introduce these toilets. For example, if the place doesn't have both electricity and water, we introduce bio toilets with no electricity needs. If the place does have electricity but doesn't have a sewer system, we introduce bio toilets with electricity needs. If they have a sewer system, we introduce flush
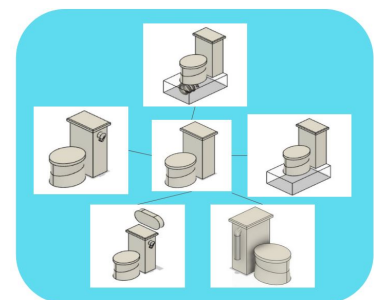

Figure 63

toilets. We introduce our toilets with these modifying options. We also have options to have a shower and or or a washlet on the toilet so that we can approach the rich.

Even though we implement toilets, it is difficult to make the maintenance system sustainable, so we produce educational books and job opportunities to approach this problem. In Japan, there is a workbook series which uses animation characters based on bowel movement. We plan to introduce this kind of book to influence children to care about sanitation more not through directly teaching that sanitation is an important issue but through studying languages or mathematics. We can also produce books to teach sanitation importance and how to use toilets directly using the characters. Then, we are in need of spreading that knowledge to adults. We provide job opportunities in three fields mainly. First, we ask local residents to clean toilets by themselves as a job. This job is important to use toilets continuously. Second, we transfer knowledge for fixing toilets to them so that they can fix most of the problems related to toilets by themselves. Lastly, if it is possible to have a factory, we ask them to work as factory workers for producing toilets. It makes it easier to understand what local residents really need for toilets for us. These two services make the toilets as sustainable products.

To introduce clean sanitation, we produce toilets with many options at first. Because it is needed to make the toilet use sustainable, we produce services with educational influence, one is to children and the other is to adults.

6.5 Strategy

We start our project by introducing toilets at a school. We educate children at the school with books. We assess whether our products have an impact on students or not. We also assess how much toilets function there. We revise our products and services to spread our services. This process is shown in the flaw chart (figure 64).
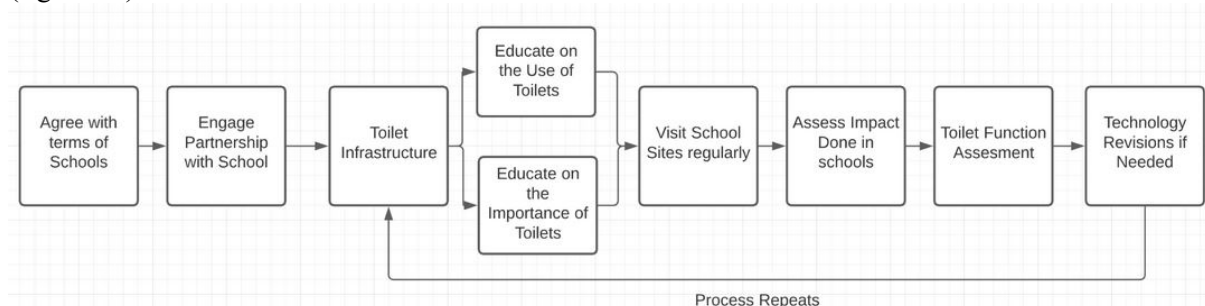

Figure 64

We made a business model canvas for this NPO as figure 65. We need partners as follows. We ask local school partners to implement toilets and educational books, and also we ask them to hire cleaning staff. We publish educational books through a partner of a book publisher. We produce toilets with technology developers. We work together with community leaders, and local NGOs.

Costs in this project are estimated as follows. For producing toilets, we spend money for prototype development and production costs. For educational books, it costs in designing characters and publishing books. For job opportunities, we have to give a salary. To fill up these costs, we ask governments, university grants, and partners for fundings at first.

We plan our project timeline as figure 66. We develop our products as fast as possible. While developing our products, we launch a site search project. We'll check whether our products fit in the region. Then, we start the fundraising process. We'll implement our first product in April, 2022. We continue to visit there for

assessments and education. At the end of 2022 we revise our services and start the next project in another region from 2023 if it is possible.
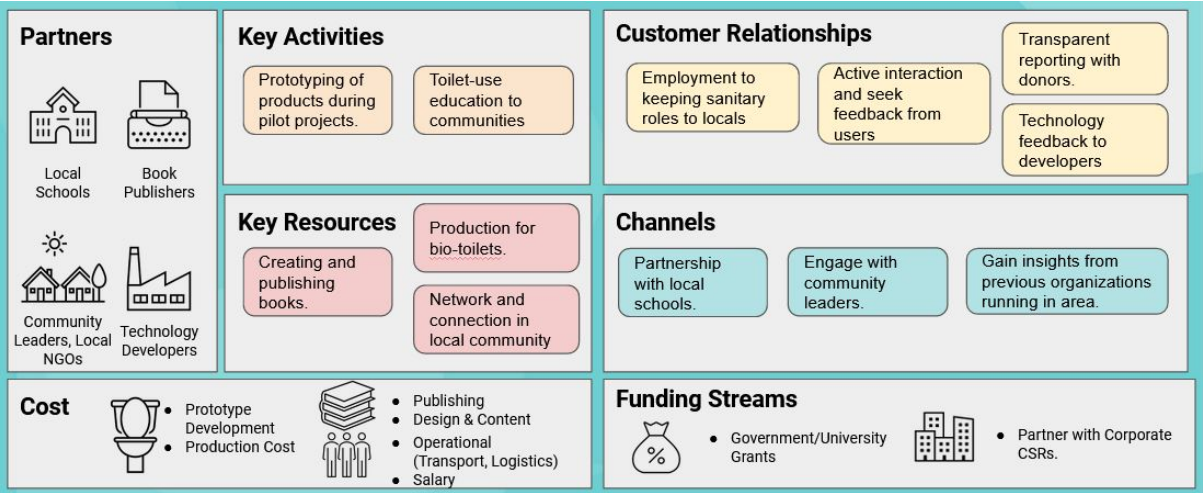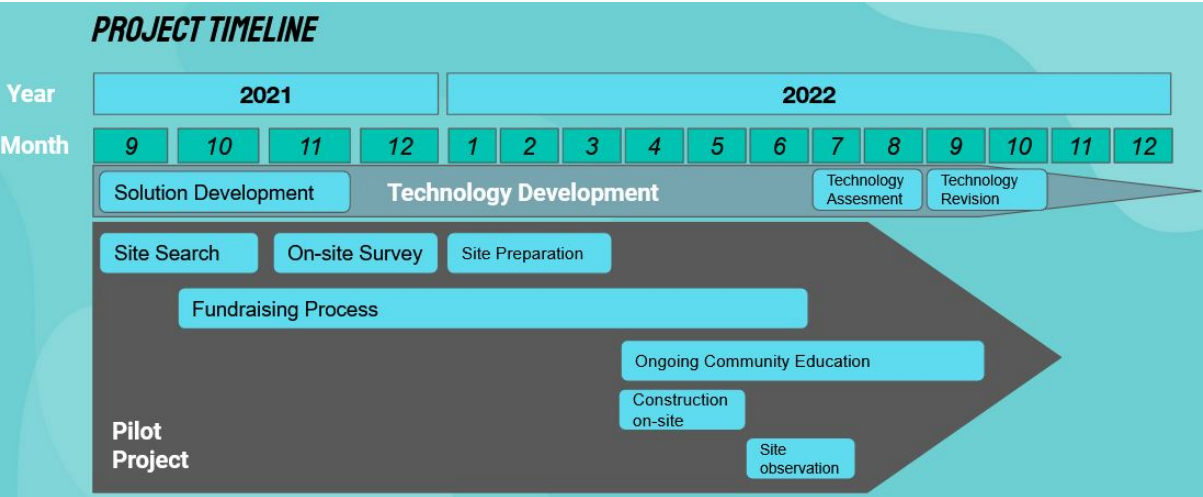

Figure 65

Figure 66

6.6 Impact on society

These implementations and strategies will be developed for rural and suburban areas in developing countries, especially in schools with poor sanitation facilities. And our main target is children in school, to create future generations who have good sanitation habits. The expected impact is; The targeted students will be examples for their families. Then, it is expected to motivate the community by adopting a healthy lifestyle in the long term. There will be an impact indicator or sustainability matrix to measure the targeted impact better and integrate sustainability into project development. Examples of matrix are such as "how many people benefit from this program?" or "how effective the technology transfer has been?"
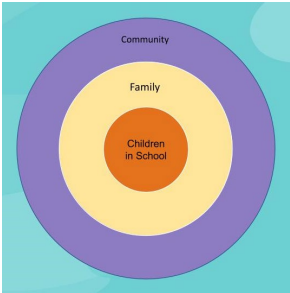
Figure 67

References:

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[3] United Nations, "THE 17 GOALS", https://sdgs.un.org/goals

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[5] https://sujal-swachhsangraha.gov.in/sites/default/files/Aerobic%20Biodigestor%20Toilet.pdf

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[7] https://unkogakuen.com/books

[8] TOTO Ltd. https://jp.toto.com/

VII. EPILOGUE

There are two things I learned through this program. First, I learned a lot about how to make slides. I think Asian students are great at making designs that are easy to understand. The second is positiveness. I think the positive behavior of Asian students is wonderful. There were a lot of places to learn from. Also, I was able to deepen my knowledge through a very valuable lecture. Thank you so much.
by Rina

Throughout the AYSEAS program, many students from different countries share their opinion and have some cultural exchange. It was an excellent program for me because it showed me that people could get along with others even though it was zoom. Also, due to their different backgrounds, everybody gives an idea with their background and, most of them surprised me a lot. I've never thought these ways before. Thanks to the AYSEAS program, I could learn about Asian cultures and also broaden my point of view.
by Tem

All the lectures, group work, and free time are unforgettable, but I would like to note four things I have learned from the program.

First, there are many things to be considered even for one support project. Before the program, I had imagined that how long a project continues depends on mainly the height of demand. I learned a good plan is not enough. We also need financial profit and the involvement of local people. In the first place, small trials and mutual understanding are necessary for planning.

Second, some usual things in Tokyo are unique from other places. In the visit to Hitachi, I was amazed at the many technologies and processes are required to construct a subway. Also, sometimes I was asked about the train system in Tokyo in free talk. I have used trains since I was little and have taken them for granted. Therefore, I had thought that concentrated railways are common among capital cities. I want to talk more about transportation systems with my teammates.

Third, -it is the most important- communication is the key to plan something big. Our presentation was chosen as the best speech. That owed much to my team members. Zei showed great leadership. She even visualized our spread ideas and showed our main points. Samson and Jonathan always came up with creative thoughts. Yoshi and Mek gave us well-concerned suggestions when we were stuck. In the first part of the discussions, we tend to go quiet. So, I tried to go first and ask for better ideas when we moved to a new topic. I managed to join discussions despite my poor English skills. I must thank all the mates for patiently trying to guess my meaning.

What made us feel closer were games. We played "spyfall" and "guessing game" on Saturday. After that, for some reason, we can talk more casually. That reminds me of the words of Prof. Nakashima in his pre-study session; It is the length of face-to-face communication time that makes good international relationships.

Lastly, the program had a significant impact on my future. I am more interested in working with people from various backgrounds than before. I realized again that English is a helpful communication tool to do so. However, I still tend to speak in a flat voice when thinking about the following phrases. That often prevented me from making myself understood. So, I am to join English Cafe in Tokyo Tech to be able to speak English more freely. Moreover, I want to keep in touch with my teammates as long as possible. I am looking forward to when I can travel to their home countries.
by Yuki

Through this AYSEAS program, I could have much more chances to speak English with my friends from other countries than I had expected. This experience is valuable for me. However, I also found it difficult to talk in English by lack of my English skills and confidence. Now that, I have motivation to study English harder. Thank you the staffs and friends!
by Narumi

I had a great time to attend this Tokyo Tech-AYSEAS Program. I had never been such kind of program before. And I worried about this is held online not in person. But when this program started, I realized that I had worried too much about it. I had three invaluable experiences in this program. First, I had a chance talking with other countries' people. Before this program, I had been to Singapore, and I wanted to talk with Southeast Asian people. And in this program, I had so many opportunities to talk with them. And especially, I was glad

to enjoy a recreation with some foreign students. Second, I discussed with Southeast Asian student about one topic deeply. This was so amazing thing and I want to do it again in some situations. Thirdly, I could know about how amazing the Southeast Asian countries' students were. This was most important for me in this program. I had shocked about it in the first day, when they spoke English fluently. And I couldn't say other than "Yes." or "No." But gradually I talked with them deeply. And the last day, I could talk with them correctly. I was happy about it. So, this was most important experience for me.
by Hiro

This AYSEAS program gives me the opportunity to exchange opinions and make friends in ASEAN countries. I had two memorable experiences during this program. First, I learned important concepts which I've never thought in detail by Kopernik. The concepts are small experimentations and Customer Pyramid. Second, it was very shocking to me that my new friends got vaccines using COVAX. I heard a lot of news on TV that we, Japanese, don't have enough vaccines and are trying to buy more. I've also heard news that developing countries get vaccines using COVAX. However, when I saw the actual person who use them in front of me, I felt it is the thing that actually happening. I appreciate this program for giving me these opportunities.
by Yo

This is my first time to talk with foreign friends. At first, it was hard for me to join discussions. However, our Group-B held many meetings even in unofficial time and told not only serious problems but also more casual topics. As the program progressed, I became able to enjoy and speak my opinion. My main purpose was just to improve English skill, but TokyoTech-AYSEAS brought me much more things than I expected. I want to learn more English and global culture and study abroad.
by Manta

I learned a lot from the 8days program. Of these, it was a memorable experience that we discuss the SDGs issue and make a great presentation in our group F. In our group discussion, I planned to launch a company first in my life. How interesting it is! People in South East Asia were so kind and friendly talked to me so I could enjoy and speak without a hesitation.

Besides that, I could understand each culture of countries in South East Asia and the current situations around them. I want to live from now on making the most of the knowledge what I've learned in ASYAS program. I'm sure I enjoyed the program in Zoom but I hope the next ASYAS program will be done in person.
by Ukyo

This year's AYSEAS was online, and I enjoyed it very much. There are two main things that I felt through this program.

The first is the difficulty of discussing in English online. Actually, this is not my first time to participate in AYSEAS; I visited Indonesia two years ago through this program. I thought my English was better than two years ago. However, having discussions in English online was much more difficult than I expected. There are many students in Southeast Asian countries who speak much better English than I do, and sometimes it was hard to keep up with their speed. However, this difficulty made me want to improve my English even more. And I look forward to meeting them face to face someday.

The second point is the friendship between Asian countries. Because we live in Asia, we were able to get along with each other quickly, even if we were online. We were also able to have active discussions on how to make Asia a better place.

Finally, I would like to thank all of you for planning and organizing such a wonderful online program under difficult circumstances.
by Takumi

Why did I decide to join AYSEAS? I have two reasons why I want to join this program. First, I would like to experience communicating with people in other countries' universities because I want to study abroad in the future. I would like to study about energy in the future. However, the problems about energy aren't solved by the activities in only one country, but many countries must cooperate to solve them. Because I want to do activities about the energy field after learning about other countries' situations, I want to study abroad, so I thought this program is suited to know what studying abroad is. Second, I

would like to become good at communicating in English. To be honest, I'm not good at English. In fact, in the lecture that we should discuss in English, even if I could manage to convey my opinion, I couldn't hear other people's opinion, so I couldn't take part in the deep discussion. In this situation, I will not be able to study abroad, so I wanted to improve my English skill through this program.

What did I learn at AYSEAS? I learned various things in AYSEAS. Among them, I would like to mention two points. First, I learned how difficult it is to do group work in English. Although there were discussions using English in some of my university classes, I felt it was even more difficult than those. I felt a lot of frustration when I couldn't convey what I wanted to say or when I couldn't understand what the other person was saying. In addition, since this was held online and Zoom was used, it was difficult to use the body language that I could use face-to-face, which made communication more difficult. Second, I learned about how high-level university students in Asia are. I was especially surprised by the Vietnamese women in my group. She was very intelligent and her comments in the group discussion were very convincing. There were many things I learned, such as the high level of communication and logical thinking that goes beyond just studying.

I had a lot of experience in AYSEAS, and it is very useful in my future. I will never forget this experience and will continue to try to do my best.
by Yoshi

Through this program, my vision of how I want to approach the world became a little clearer, and at the same time, I was able to feel the joy of working together with people of different nationalities to accomplish my mission. Also, I felt a strong desire to study abroad after the end of Corona. In the process of writing this report, I researched the partner schools and learned about their merits, so I would like to consider them as a study abroad destination.
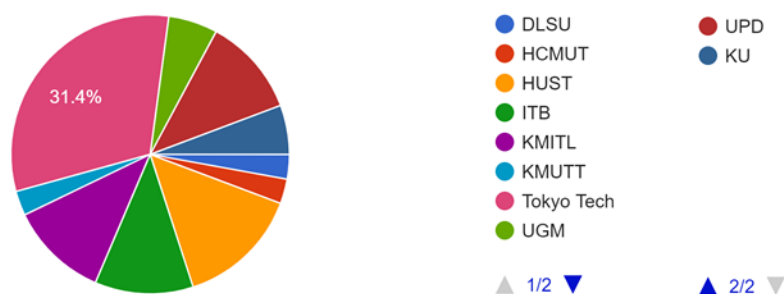by Ryo

APPENDIX: EVALUATION OF TOKYO TECH-AYSEAS 2021 ONLINE

All 35 participants in Tokyo Tech-AYSEAS 2021 were given a questionnaire about the program. The following evaluation was based on the answers to the questionnaire.
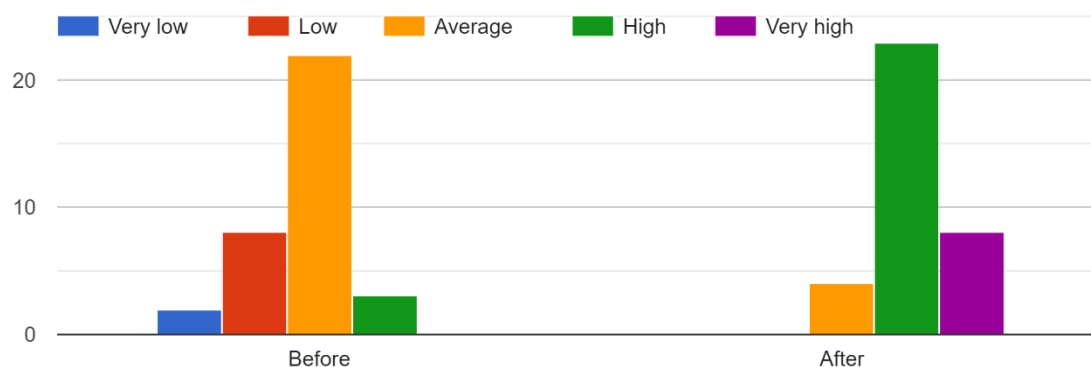
About participants
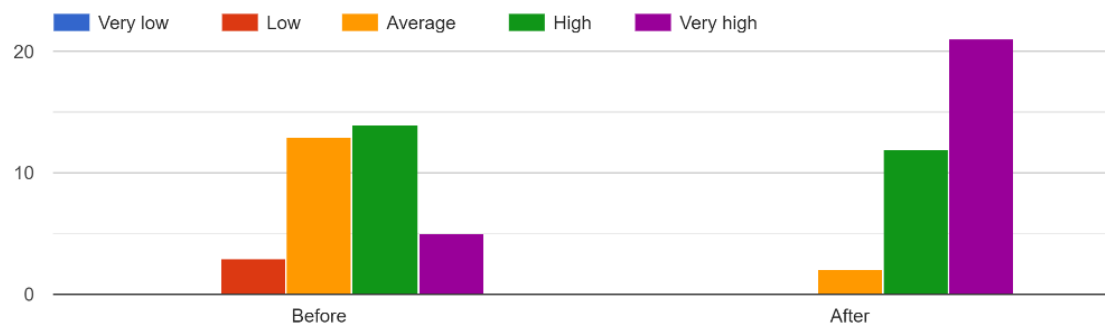
3. your school
35 件の回答

Part 1: Global awareness
For each item, please select the answers that best describes your level of interest or awareness or ability level before and after participating in AYSEAS 2021.
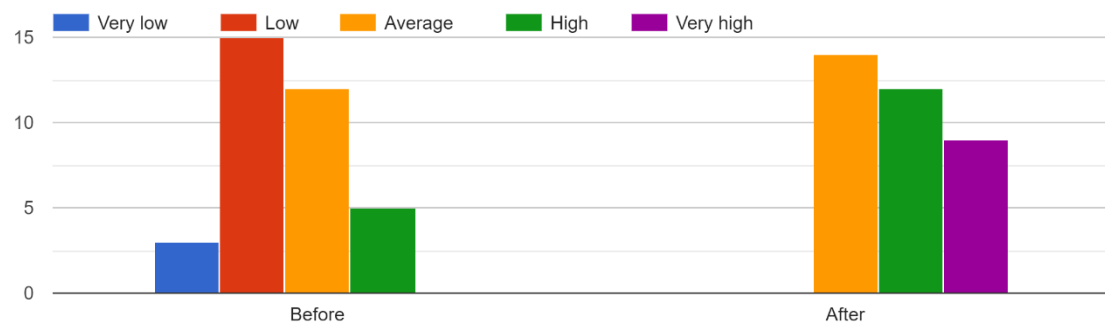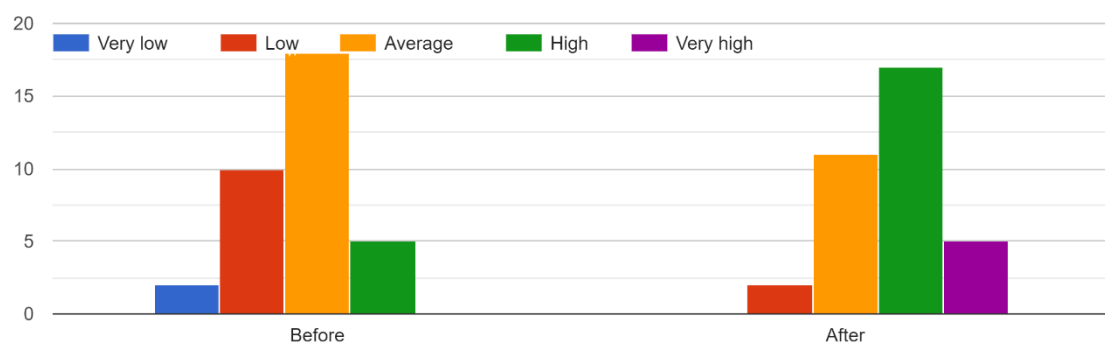
1. Understanding of cultural differences

2. Awareness of the importance of respecting differences

3. Ability to work in a multicultural team

4. Communication skills in general

5. Presentation ability
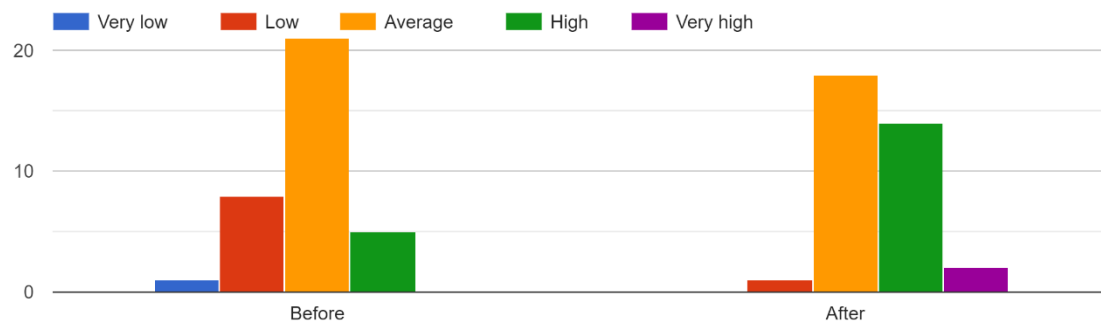
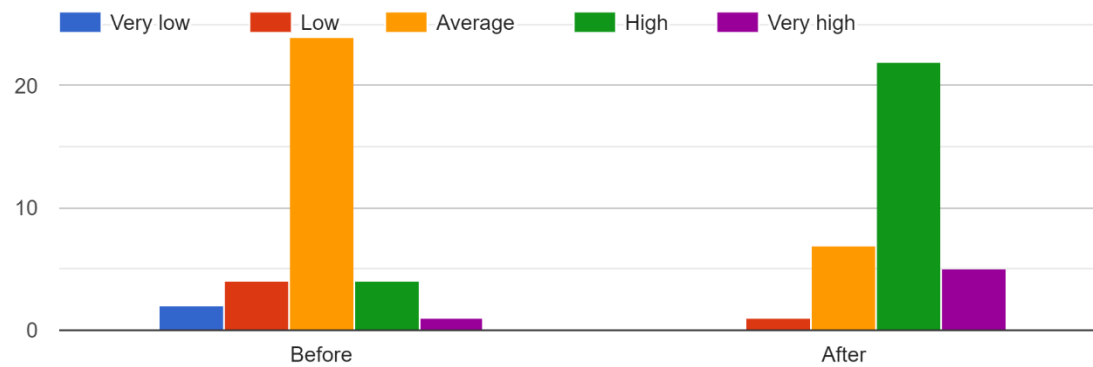## 6. Ability to communicate in English
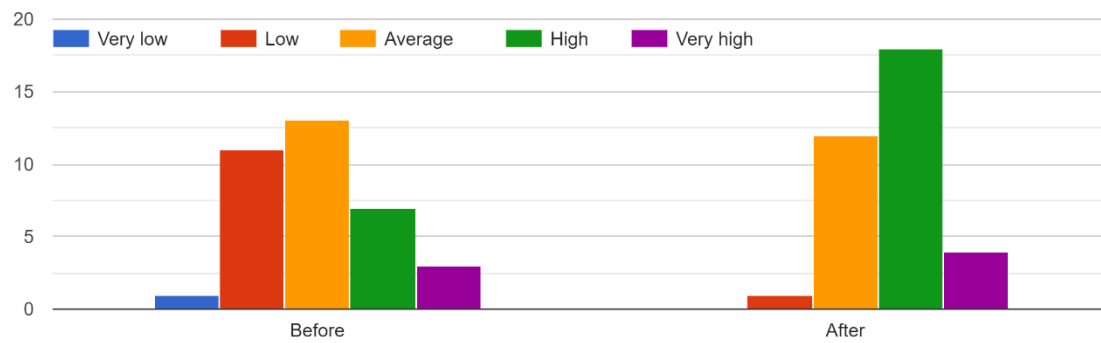
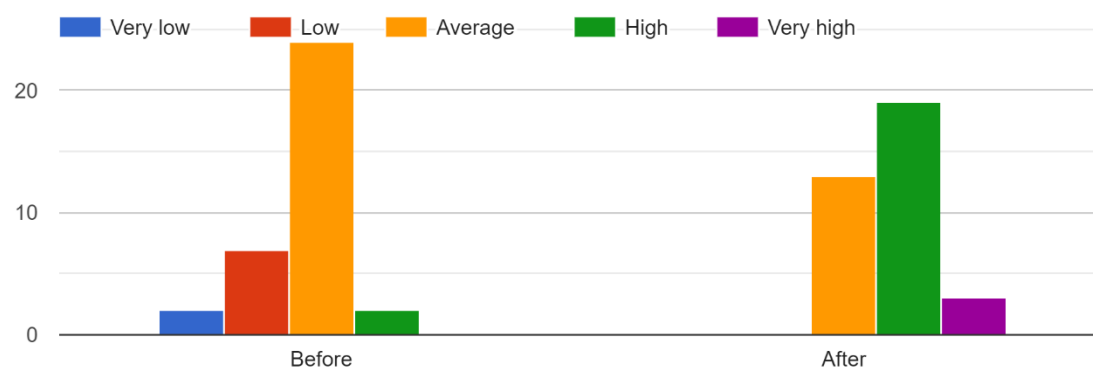## 7. Ability to think critically
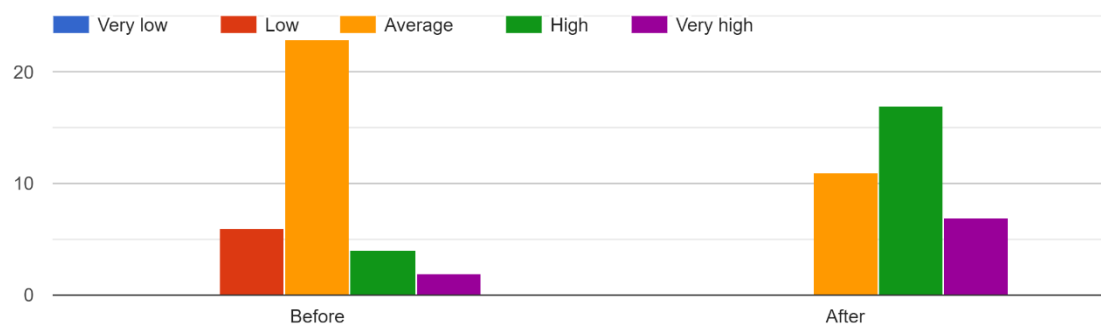
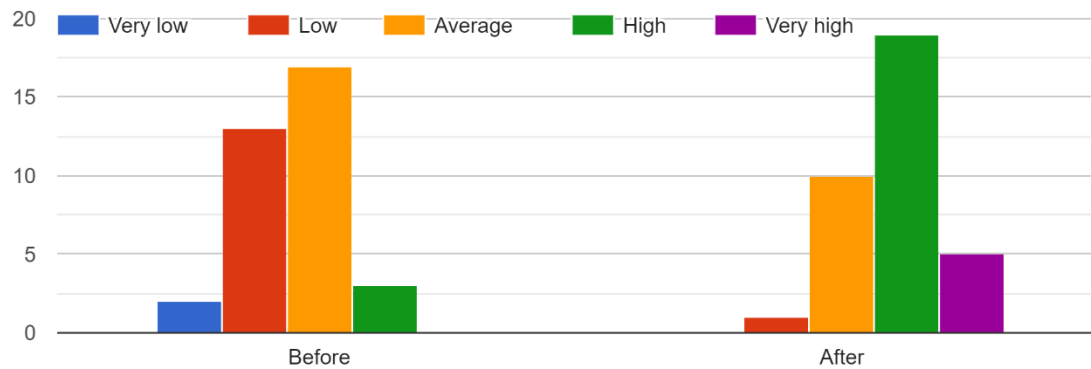## 8. Ability to develop ideas to localize/customize a program for different cultures
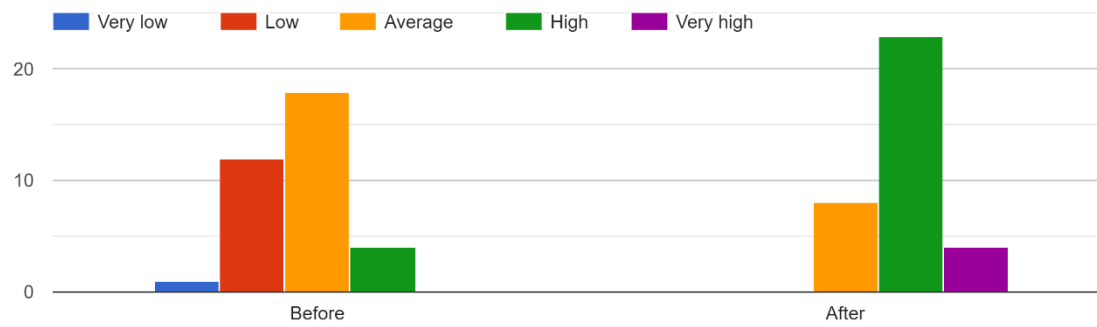
9. Ability to identify social problems of the society
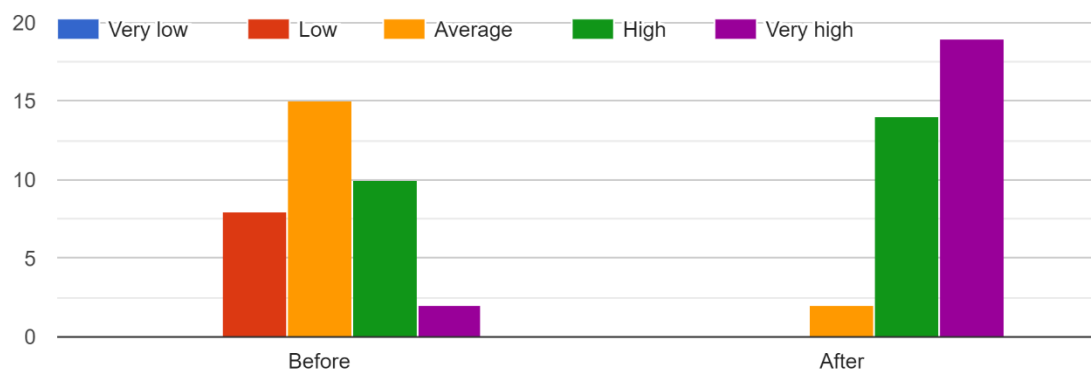

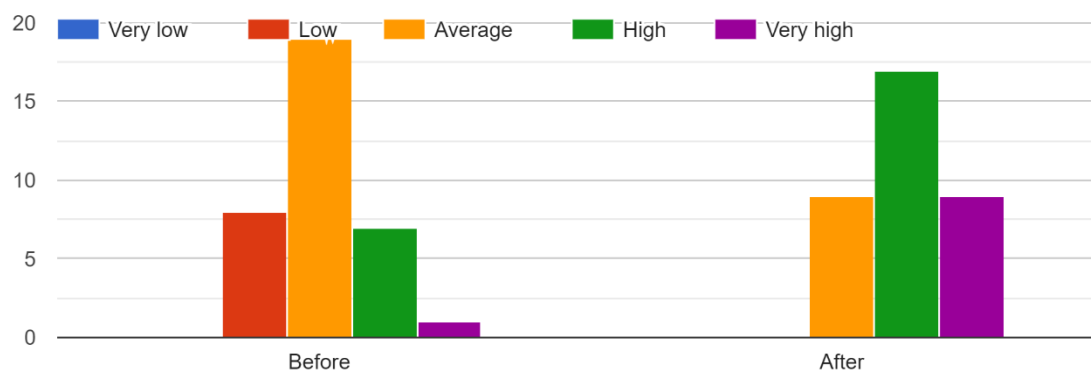## 10. Ability to find solutions for social issues you have identified

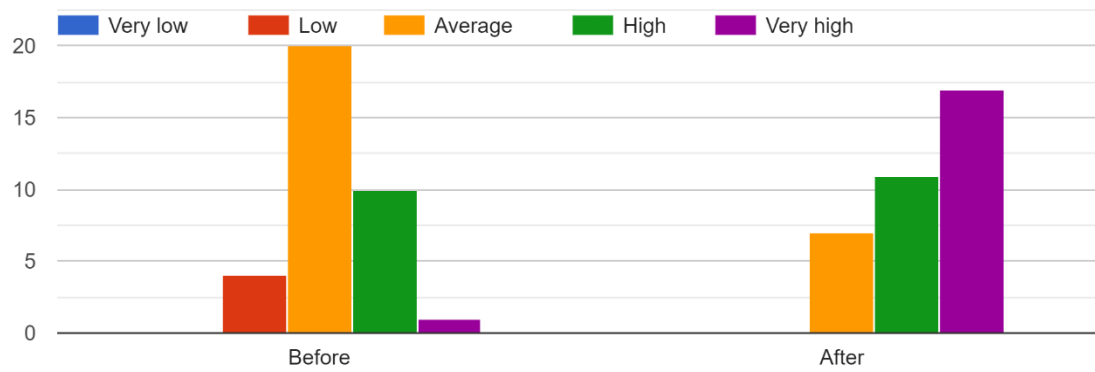## 11. Awareness of successful program implementation on global scale

12. Interest in problems common to different societies
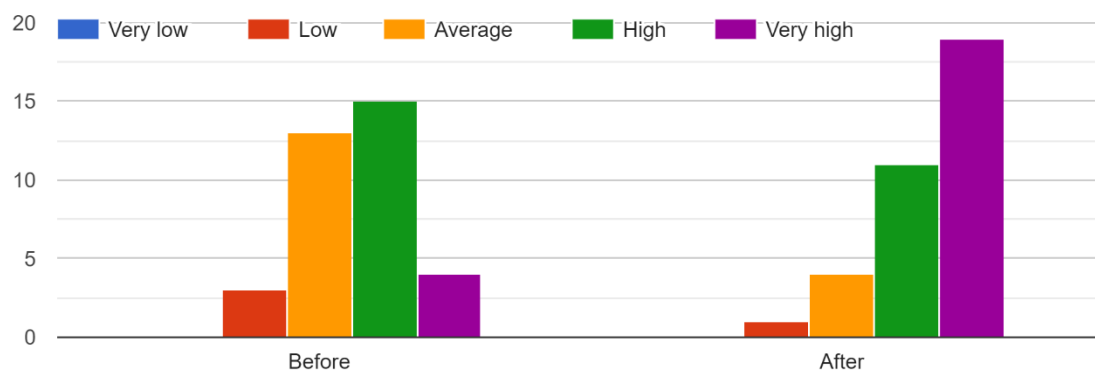

13. Confidence in becoming someone who can utilize his/her expertise and skills
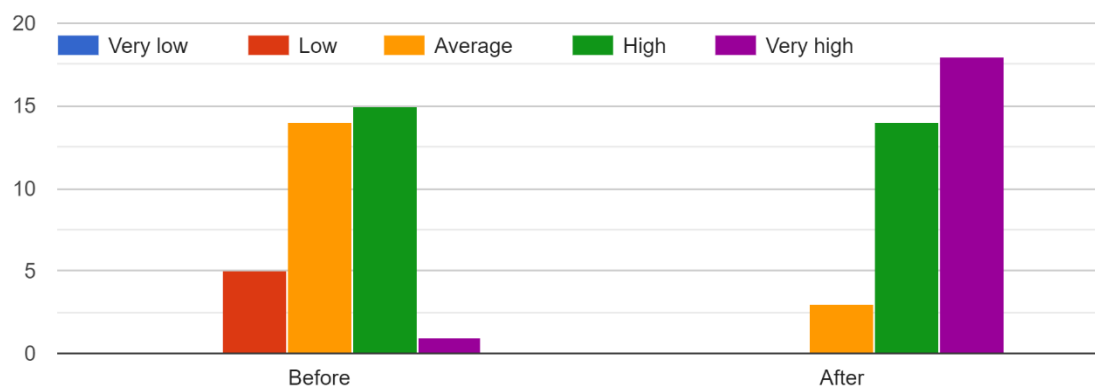

58

14. Expected impact on your future plans

15. Interest in advanced countries
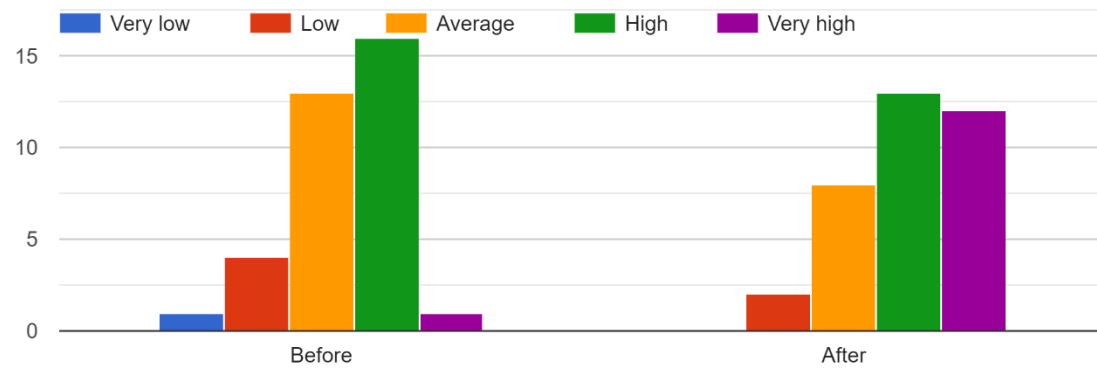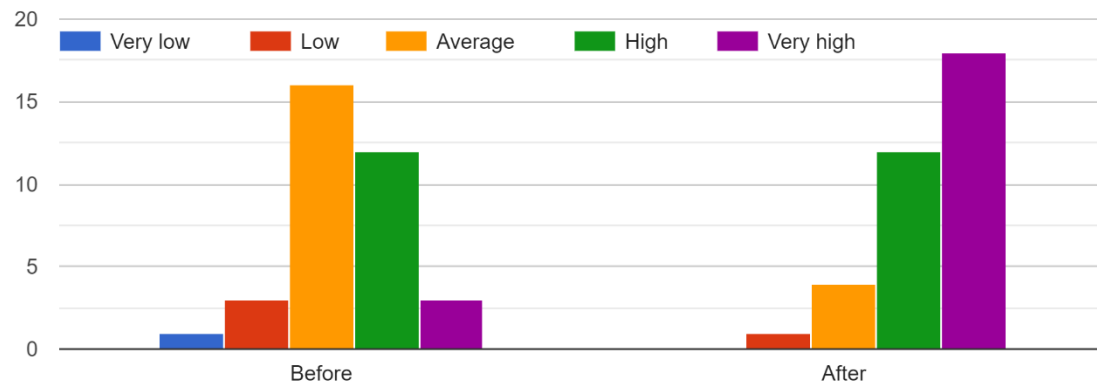

16. Interest in developing countries

17. Interest in working in developing countries

18. Interest in contributing for the development of developing countries

19. Interest in member universities

60
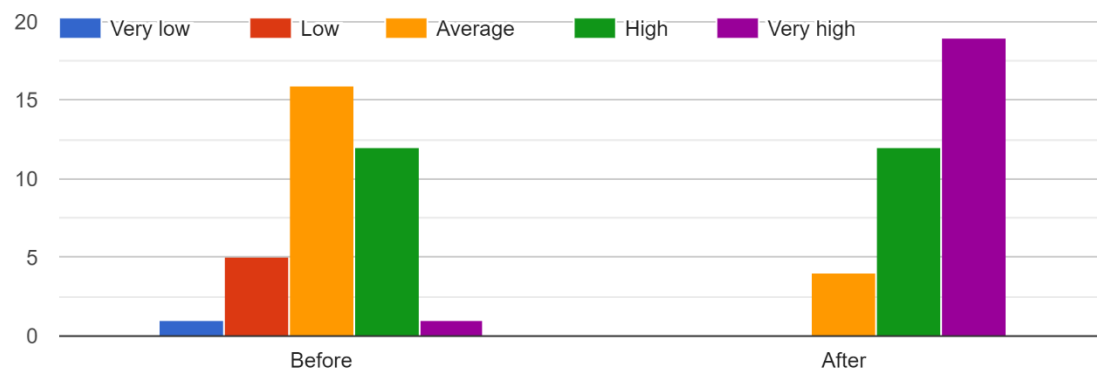
20. Please describe your impression about member universities
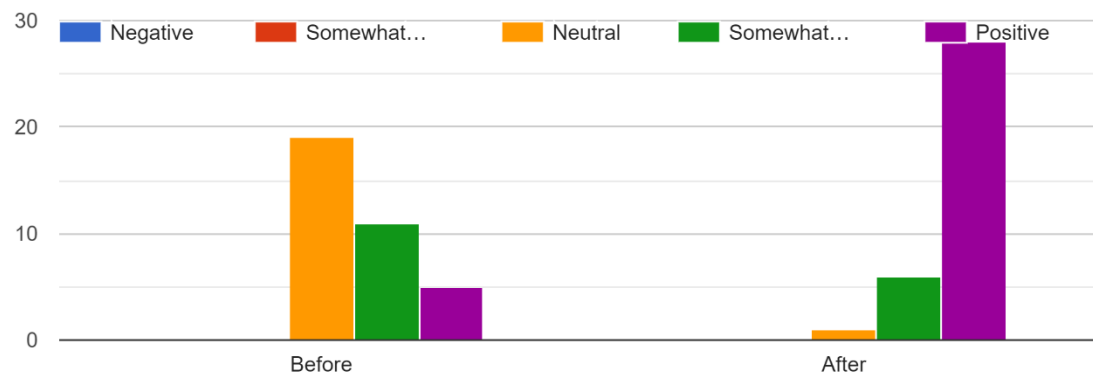
21. Interest in going abroad for future studies
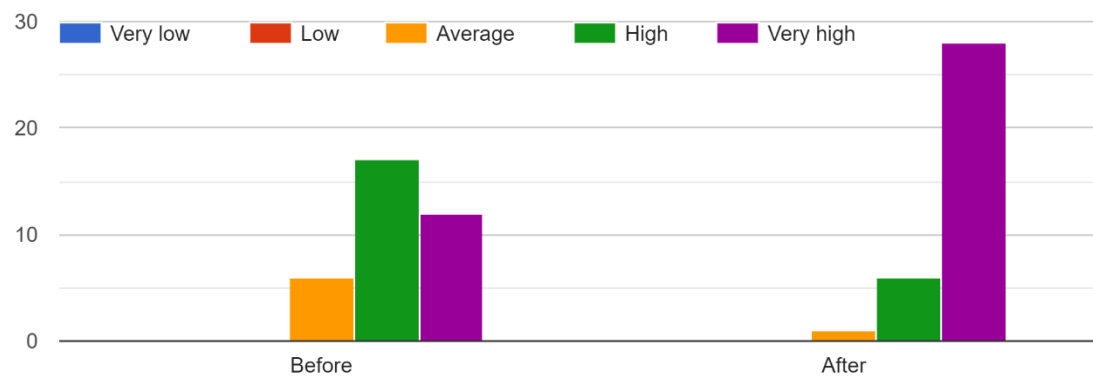
22. Overall motivation to visit abroad
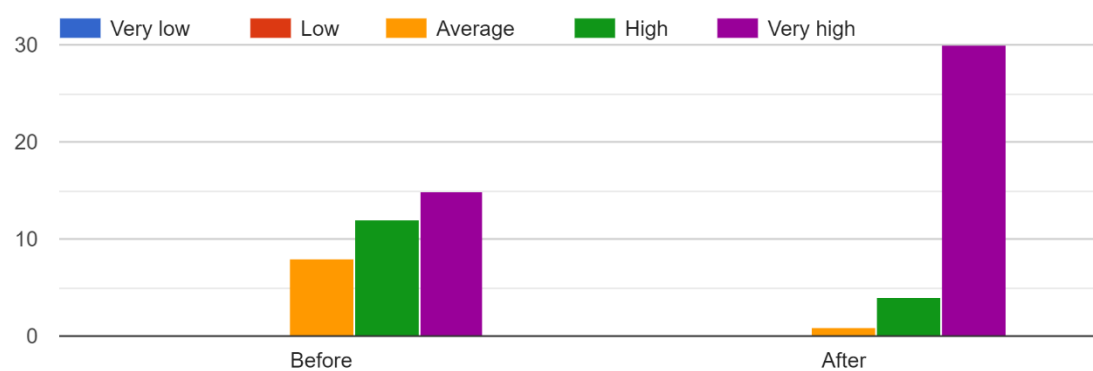
23. Overall interest about the Foreign Study Program
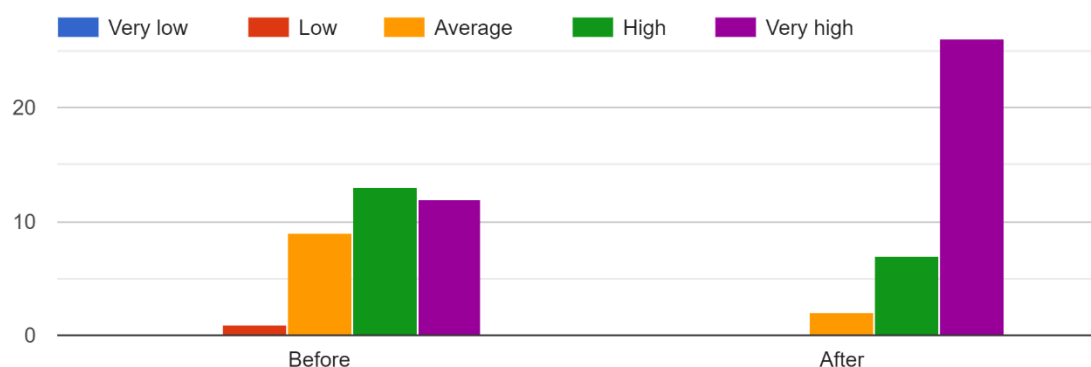
Total Evaluation

Rating Scale	Very low Negative	Low	Average	High	Very high Positive
	1	2	3	4	5

Scale Average Before & After the Program
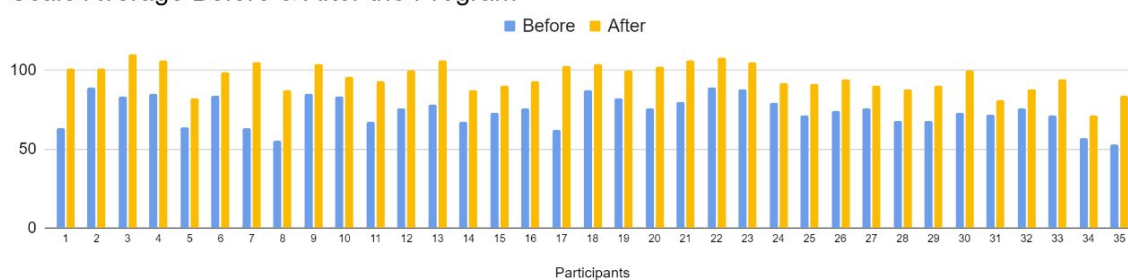
Part2: Tokyo Tech-AYSEAS

Q.1 How did you know about Tokyo Tech-AYSEAS?

Q.2 Please specify your initial motivation for joining Tokyo Tech AYSEAS 2021.

2. Please specify your initial motivation joining Tokyo Tech-AYSEAS 2021 (Tokyo Tech students)

- To improve communication skills in English.
- To make friends with students from member universities.
- To learn other countries' culture

2. Please specify your initial motivation for joining Tokyo Tech-AYSEAS 2021. (Member Universities' students)

- To make friends with students from member universities.
- To improve communication skills in English.
- To learn other countries' culture
- All of the choices
- other

Q.3 Please specify the main reason why you decided to join Tokyo Tech-AYSEAS 2021.

3. Please specify the main reason why you decided to join Tokyo Tech-AYSEAS 2021. (Tokyo Tech students)

- program content
- Cost of participation

3. Please specify the main reason why you decide to join Tokyo Tech-AYSEAS 2021. (Member Universies' students)

- program content
- Cost of participation
- For the experience
- other

Q.4-1 Please indicate your overall satisfaction with Tokyo Tech-AYSEAS 2021.

4-1 Please indicate your overall satisfaction with Tokyo Tech-AYSEAS 2021. (Tokyo Tech students)

- Very dissatisfied
- Disatisfied
- Neutral
- Satisfied
- Very satisfied

4-1 Please indicate your overall satisfaction with Tokyo Tech-AYSEAS 2021. (Member Universities' students)

- Very dissatisfied
- Dissatisfied
- Neutral
- Satisfied
- Very satisfied

Q.4-2 Please describe why you chose the above answer.
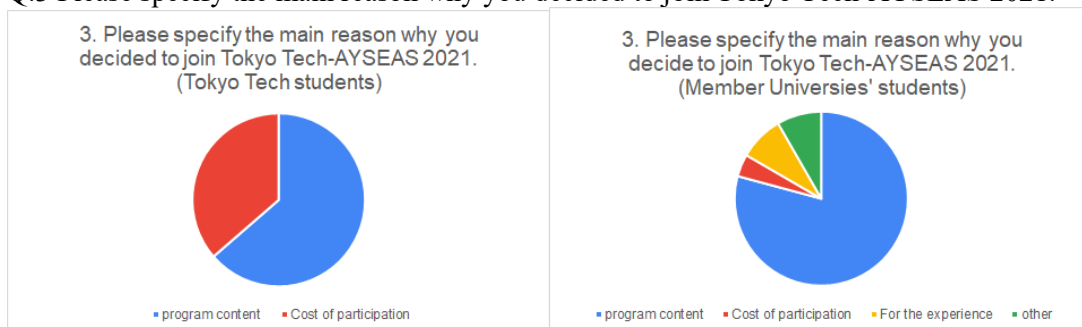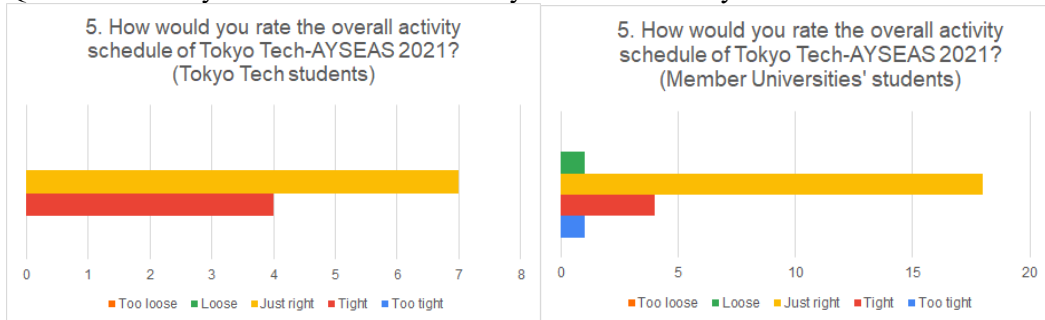
・ Because it has a lot of interesting and valuable chances to know about different cultures.
・ Overall program was really good. I want to know more about team members and their country.
・ I love the people who join this program very much and I can grow up in this program.
・ I learned many useful concepts and mindsets through virtual sessions and discussions. I wish I could visit other countries to see abroad through five senses.
・ I can communicate with people from other countries but the internet connection is a little bad.
・ I could communicate with other countries' people and make friends. But if it was held face-to-face, I could have had better experience.
・ I could study speaking English.
・ It was a very valuable opportunity for me to understand the culture. I realized that there is so much to learn even online.
・ Members of Group-B were so friendly and we talked a lot even outside of official program-schedule. My big purpose to take this program was to communicate in English a lot, so it was very suitable for me.
・ Everyone in this program made me impressed >_<
・ Everyone be kind to me. I made many troubles but they helped me solve these problems.
・ I was able to meet and work with a lot of different people.

・professionally organized the program, the sessions took place successfully and effectively. Give me great experiences. Besides, I made new friends, learned interesting things, and learned a lot of useful knowledge.

・The AYSEAS program give me a lot of knowledge from many fields, and I have many new friends who are very excited and intelligence.

・Met amazing people and gained a large amount of new insights on how to become a global leader!

・I had unforgettable moments. I learned a lot of new things, met a lot of new friends and got to know where I am. I have also improved myself. Thank you so much, Tokyo Tech-AYSEAS 2021

・I got to meet lots of amazing friends to work with and inspirational speakers and I gained the motivation I needed to do better on my studies this semester. Everyone is also very supportive and friendly.

・I never really expected that an Online program could actually make me feel like I am doing an offline program. I was actually quite pessimistic that in a week I will be able to make memories since last two years it was conducted offline in ITB. But boy was I wrong! This year's program is surely going to make me remember 2021 not only as a COVID Pandemic year but a life changing year where even through online platforms we can have fun. I really loved how Nakashima Sensei said that what's important is to have connections and a heart to start something!

・I was able to learn a lot from the guest speakers and site visits. I had so much fun interacting with participants from other countries. Although I wished it were in person, I understand the situation and I think we were still given the best treatment despite the limitations of the online setup. The organizers' are also so nice and wonderful.

・I get to learn new things! Especially how other people from outside my country think, I feel that the AYSEAS program has exceeded my expectations, I have achieved what I want from the program, I got new friends, experience, and of course a new way of thinking and seeing things!

・The program surpassed all of my expectations. I really love how all the lectures can be useful for our final presentation. I also like the idea that we are also expected to have an output throughout the program. I also commend the distribution of members per team since it is well represented by different nationalities. This really encourages more discussion since we came from different cultures and backgrounds. And because of this, we were also able to form friendships and memories.

・This program is unique and exciting. It is one of the best student exchange programs I ever joined, with a balanced blend of collaboration and experiences with the different cultures.

・I got what I expected, and even better

・Connections I gain are very profound for me, as I can learn about different cultures and how people work in different cultures. The lectures are also awesome, especially from Kopernik, which truly inspires me to collaborate with them.

・Overall, this program exceeded my expectations. The contents of this program are huge. At first, I thought that their will be like a small university project, but, this program have recruited people who actually work in that field.

・This program was great and gave me a lot of experience, but It was held when my university was on and I had a computer project to do that week. I think if I were free from school assignments, I could be more focused on this very interesting camp.

・I didn't expect too much when I decided to join AYSEAS2021.
But after the program, I have received so so many things. By AYSEAS2021, I met many new friends, they are all very nice and friendly. I still talk to someone everyday now. They are all my valuable friends!!!!
And AYSEAS inspired me a lot, I really want to explore the World right now, too increase   my knowledge and meet all AYSEAS2021's paticipaints in person. I'm highly motivated when I saw everyone's success.

・I find new friends from other countries. I got to know the project and the organization other than Thailand. But the thing that me not "very satisfied" was the schedule that collapse with my class at the university which is a very important class that I should not skip but I wanted to join the program.

・I think it's a fun and new experience for me to be a part of an international program since I haven't been a part of it before.
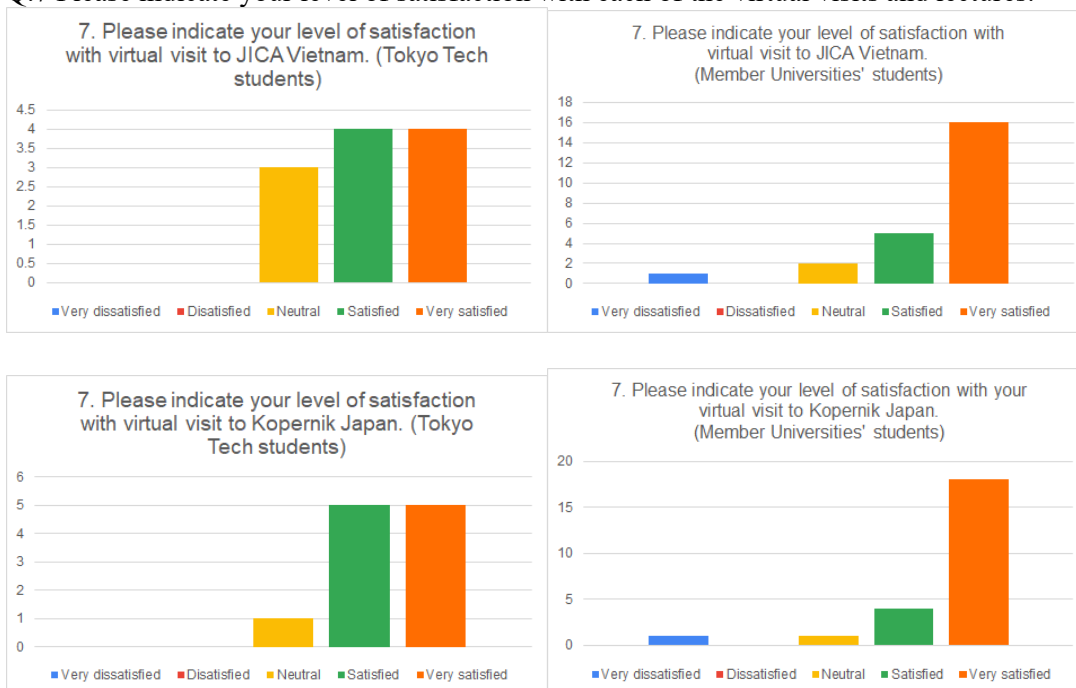
Q.5 How would you rate the overall activity schedule of Tokyo Tech-AYSEAS 2021?

5. How would you rate the overall activity schedule of Tokyo Tech-AYSEAS 2021? (Tokyo Tech students)

5. How would you rate the overall activity schedule of Tokyo Tech-AYSEAS 2021? (Member Universities' students)
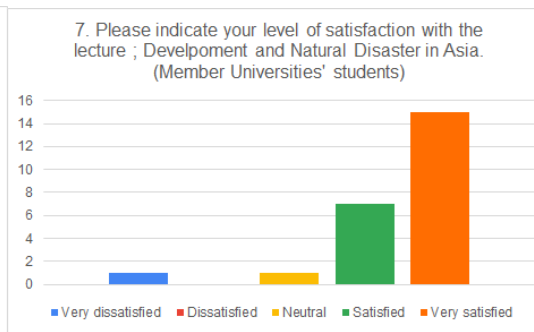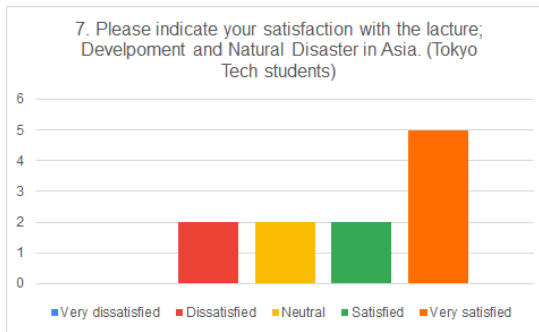
Too loose   Loose   Just right   Tight   Too tight

Q.6 Would you recommend Tokyo Tech-AYSEAS to others?

6. Would you recommend Tokyo Tech-AYSEAS to others? (Tokyo Tech students)

6. Would you recommend Tokyo Tech-AYSEAS to others? (Member Universities' students)

Yes   Maybe   No

Q.7 Please indicate your level of satisfaction with each of the virtual visits and lectures.

7. Please indicate your level of satisfaction with virtual visit to JICA Vietnam. (Tokyo Tech students)

7. Please indicate your level of satisfaction with virtual visit to JICA Vietnam. (Member Universities' students)

Very dissatisfied   Disatisfied   Neutral   Satisfied   Very satisfied

7. Please indicate your level of satisfaction with virtual visit to Kopernik Japan. (Tokyo Tech students)

7. Please indicate your level of satisfaction with your virtual visit to Kopernik Japan. (Member Universities' students)

Very dissatisfied   Disatisfied   Neutral   Satisfied   Very satisfied

7. Please indicate your level of satisfaction with virtual visit to Hitachi Ldt. (Tokyo Tech students)

7. Please indicate your level of satisfaction with virtual visit to Hitachi Ldt. (Member Universities' students)

7. Please indicate your satisfaction with the lacture; Develpoment and Natural Disaster in Asia. (Tokyo Tech students)

7. Please indicate your level of satisfaction with the lecture ; Develpoment and Natural Disaster in Asia. (Member Universities' students)

Q.8 Please indicate your level of satisfaction with the "Discussion and Presentation".

8. Please indicate your level of satisfaction with the Discussion and Presentation method. (Tokyo Tech students)

8. Please indicate your level of satisfaction with the Discussion and Presentation method. (Member Universities' students)

8. Please indicate your level of satisfaction with time for discussion. (Tokyo Tech students)

8. Please indicate your level of satisfaction with time for discussion. (Member Universities' students)

8. Please indicate your level of satisfaction with time for presentation. (Tokyo Tech students)

8. Please indicate your level of satisfaction with time for presentation. (Member Universities' students)

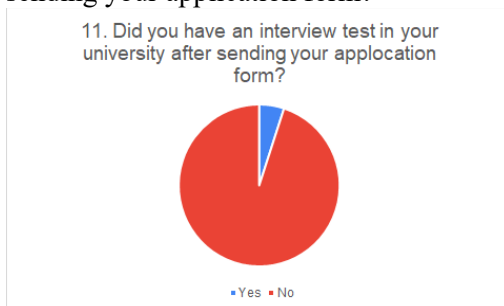Q.9 Please answer what you learned through discussions during the program.

Q.10 (Only for Tokyo Tech students) Please indicate your satisfaction with pre-study session.
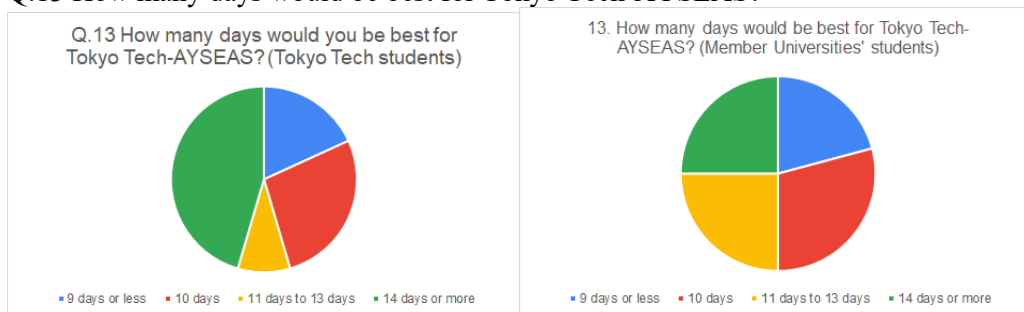

Q.11 (Only for member universities' students) Did you have an interview test in your university after sending your application form?

Q.12 If you would participate in AYSEAS 2022 and you could travel abroad, which country would you like to go to?

12. If you were participate in AYSEAS 2022 and you could travel abroad, which country would you like to visit? (Tokyo tech students)

Vietnam ■ Singapore ■ Thiland ■ Philippines ■ Indnesia

12. If you were participate in AYSEAS 2022 and you could travel abroad, which country woukl you like to visit? (Member Universites' students)

■ Vietnam ■ Singapore ■ Thiland ■ Philippines ■ Indonesia ■ Japan ■ all

Q.13 How many days would be best for Tokyo Tech-AYSEAS?

Q.13 How many days would you be best for Tokyo Tech-AYSEAS? (Tokyo Tech students)

■ 9 days or less ■ 10 days ■ 11 days to 13 days ■ 14 days or more

13. How many days would be best for Tokyo Tech-AYSEAS? (Member Universities' students)

■ 9 days or less ■ 10 days ■ 11 days to 13 days ■ 14 days or more

Q.14 What discussion topics would be of interest to the participants?
・Education
・Science and engineering
・New Technologies and innovation
・Transportation(mainly train) conditions of each country
・disaster prevention
・income difference
・SDGs
・Cultural differences
・Play games together
・Sustainability
・Global Water Crisis
・Covid-19
・Global environments
・how to build a successful business/startup.
・Social project
・poverty
・protect animals
・Future improvements to help the world become a more resilient place
・Aid
・The infrastructure
・Renewable energy transition: is ASEAN ready for the change?
・Exploring the role of prejudice in societal problems
・global problems
・food security
・Cultural Heritage, landmarks and places to travel
・critical thinking
・preferences in different aspects of each person
・exchange some experiences to others

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・The development of many online platforms

Q.15 Please describe your suggestions, ideas, and comments for Tokyo Tech-AYSEAS.
・it would be good if you have other area versions of AYSEAS like Africa and Europe.
・I suppose that we may have not been run out of time if ice-breaking-session had been longer.
・It's a really good program, but if we see the program with many videos it would be more interested.
・Please tell Tokyo Tech students more about the wonderfulness of the southeast Asian countries.
・The online games are useful for such a program.
・The discussion with Kopernik was the most impressed session I've ever had. We should ask them again to talk.
・online program is really good because it's free but you have to think about the internet connection problem.
・I had few opportunities to have daily conversation, so I would like you to increase such opportunities.
・I hope the program will continue for a long time to come as it is so wonderful every year.
・I would be grateful if there were more opportunities to talk other group members.
・Please keep your program standard! :)
・I think everything is good don't have anything to comment more
・I really love AYSEAS and not much change is needed
・Overall it was great. I really had an amazing time this week. :) Maybe extend the presentation time to 20 mins next time. Because I think the participants has so many ideas to pitch and it might be hard to just explain it in 20 mins.
I really love that there is variation with the set of lecturers and topics.
・Hope we had more chances to interact with one another.
・Tokyo Tech-AYSEAS is very well organized, it would be better if we could meet face-to-face. Although held online, the program left me with many memories that I will never forget. A great program. Thank you organizers
・my knowledge has been expanded and I'm more confident as I continue my learnings in the Philippines!
・Future catastrophes and new problems will emerge that the world will face. To be global leaders, we need to prepare for whatever situation that may happen so we can survive, strive, and be sustainable to get through the future problems. Tokyo Tech-AYSEAS is a great program to facilitate that discussion and be a room for innovations. Thank you very much!
・This is a very meaningful program. It is hoped that the program will continue to operate for a long time.
・I love how it turned out overall. I thought it will be kind of boring like class lecture but it was so interactive and the topics discussed are diverse yet very critical for the development of the society. Thank you very much Tokyo Tech for organizing this event. Can I join again next year haha
・First of all I'll just like to say Thank You to the Organizing team of Tokyo Tech AYSEAS 2021 and all the participants! I loved how the organizing team made the slack group and Facebook 2 weeks before the program and also the pre event! Because of that I got to be close to my group mates and spend more time playing! Also because this year is held online I am thankful that the program selected the number of participants of each country selectively so we could really have connections from people of different countries.

Maybe some suggestions if AYSEAS is going to be held online again next year:
1. I guess this year's program is too short, maybe 10-11 days is going to be great.
2. Have more virtual visits or lectures if possible
3. Have more than 1 pre event before the session so maybe some who cannot join in the first one can join the second one.

Things to be appreciated:
1. A small report after each discussion session so we could know what the other groups are doing
2. The zoom room is 24 hours open yeayyy. Thank you for that organizing team!

3. Nakashima Sensei and Ichinose sensei was always reminding us to use time outside the program to meet or discuss and also ask for feedbacks in every virtual site visit.

Good luck for your final report Tokyo Tech Students! Always keep in touch <3
・It is already good for an online setup. I just wish that we could join again next time when in-person visits are allowed. Overall, I love the program.
・Like i said before, the AYSEAS program has exceeded my expectations, i thought that being online would be a setback for the program, but it isn't, it still fun and exciting, the events are really memorable. But it is sad that i cant meet the participants face to face and hang out with them offline, and also i cant visit other countries. My suggestions for this program if its held online again, maybe the group chat like in slack, people can be more active there, it feels a little bit quiet in the general section hehe, maybe talking about random things and getting closer to each other be it the participants or the lecturers and ayseas committee
・Thank you for this great opportunity! It's such a well organized event. Even though it was only done online, we really made meaningful friendships and memories.
・The Tokyo Tech-Ayseas program is a life-changing opportunity in several ways. Not only does it help us to improve ourselves (how to communicate and collaborate, but we'll also learn by interacting with people from various backgrounds and cultures. It was a meaningful experience for those who desire a global perspective.
But if I may suggest, I am very interested in knowing Japanese culture's philosophical/thinking aspects. For example, why are Japanese people so punctual, disciplined, and hardworking?
・It's a really good idea to put ice breaking in the session, although not every presentation have it. I guess every presentations need ice breaking so it can attract more attention from the audience.
・More organized informal sessions between participants would be great.
・I think that it would be better if there were something like cultural exchanges more.
・I would like to suggest that this program will be more suitable for me to join if it is held when my university is close. I hope some days I could have an opportunity to join this camp when it is held onsite, and also meet face-to-face to all of participants in the near future.
・I just want to say that I love Tokyo Tech-AYSEAS so much. Thank you for the wonderful program
・The schedule is acceptable because everyone live in different time zone but I just confuse to join my class and the program at the same time on Monday. The presentation about the organization was great and about professor lecture as well. If there an on-site in Thailand I would like to join.
・In my opinion, I think the schedule it's a bit too early for me on some days since I lived in a UTC+7 time zone but other than that I think the program it's fun.
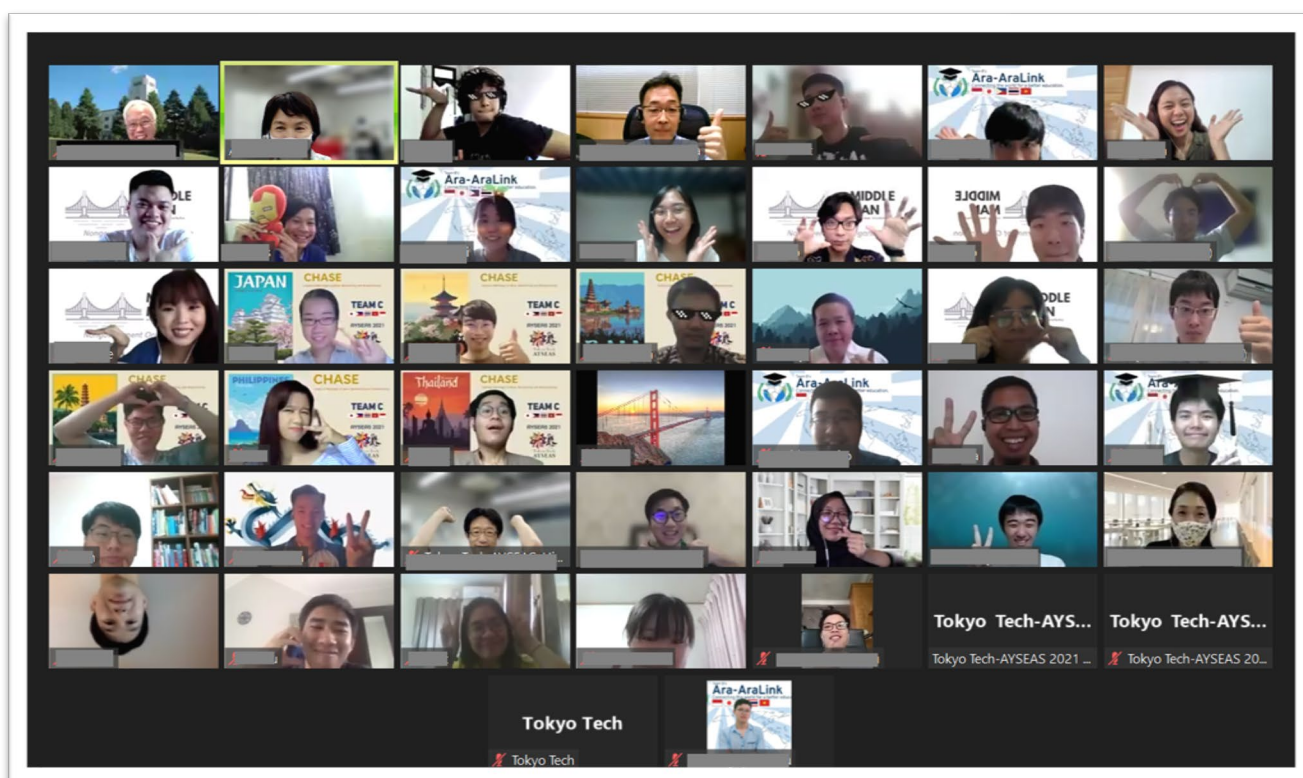
Tokyo Tech-AYSEAS Online 2021:

Tokyo Tech-Asia Young Scientist and Engineer Advanced Study Program Online 2021

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