

Assessing **Jakarta** as an Interactive Science and Social Project Center of Chulalongkorn University



Jakarta is the largest and the capital city of Indonesia locates on the northwest coast of the island of Java. It is the first overseas project site for the Interactive Science and Social Project of the BSAC program.

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This report represents the work of four Chulalongkorn University students submitted
to the faculty as evidence of the completion of the degree requirements.

Abstract

This feasibility study, prepared for the Bachelor of Science in Applied Chemistry (BSAC) Program, details how the city of Jakarta, Indonesia could serve as the program's first international project center for Interactive Science and Social Project (ISSP). Through interviews with the BSAC and WPI faculty, we outlined the characteristics of a successful project center. This information guided our work as we interacted with potential project partners and evaluated accommodation options, modes of transportations, food selection, and basic operational expenses to run a project center in Jakarta. We met with eight potential project sponsoring organizations and identified some potential project themes. Based on the predetermined characteristics and the evaluation data, we recommend that the BSAC program to operate a new project center in Jakarta, Indonesia.

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Acronyms

BSAC	Bachelor of Science in Applied Chemistry
WPI	Worcester Polytechnic Institute
IQP	Interactive Qualifying Project
ISSP	Interactive Science and Social Project
UNJ	State University of Jakarta
IGSD	Interdisciplinary Global Studies Division
ASEAN	Association of Southeast Asian Nations
CBD	Central Business District
BRT	Bus Rapid Transit
NGO	Non-Governmental Organization
MRT	Mass Rapid Transit
LRT	Light Rail Transit
IKIP	Jakarta Institute of Teaching and Education
USD	United States Dollars
RP	Rupiah
CEO	Chief Executive Officer
SCG	Siam Cement Group

Executive Summary

Interactive Science and Social Project (ISSP) is a mandatory course for third-year students of the BSAC program. It challenges students by relating social needs or concerns to specific issues raised by social, humanity, and technology. Students are able to apply theory to practice in every aspect of their projects. In the process, they gain practical life experience and develop professional skills which serves the purpose set by BSAC. Since 2007, there have been approximately 130 successful projects in Thailand. To further expand the global network to broaden cultural insights and to develop tangible communication skills for future students, BSAC is looking to open a new project center overseas. Initially, BSAC selected the city of Jakarta, Indonesia for this purpose. Our team was selected to help BSAC identify and evaluate all characteristics of Jakarta to see if it fits for an overseas project center.

Our approaches were set as follows:

- Objective 1: To understand the characteristics of a successful project center
- Objective 2: To evaluate suitable living and logistics factors for students
- Objective 3: To create and document a network of the potential sponsors
- Objective 4: To produce media for promoting the ISSP in Jakarta

Methodology

Our team began by interviewing Professor Richard F. Vaz, an ex-Director of WPI Global Project Program, WPI advisor to Bangkok in term C-2018, and ISSP advisors for their insights on a successful project program and logistics. We researched the WPI website and IQP reports to identify the characteristics and qualities of a successful and popular project center. To obtain background information on target customers, we surveyed BSAC sophomores on what they know about ISSP, their interest in research topics, and their perspective on Indonesia.

During our one month stay in Jakarta, we evaluated accommodation choices and features, transportation options, food choices, and local attractions. Criteria were set by the opinions of eight BSAC students who spent one month in Jakarta. Project expenses were estimated from cost accrued for a one month living period.

Prior to leaving for Jakarta, we screened some organizations in Indonesia that focus their business on sustainability, environmental, education, and social impact. We sent out electronic promotional media introducing the ISSP program and making request for a dialogue in seeking common interest for future collaborations.

Lastly, we collected all the results and inserted some interesting points in the video clip which we released on our official YouTube channel. We also created an Instagram account to provide updates on our daily experience. After, the media had been published, we sent post surveys to the same BSAC sophomores to measure the effect of the media which provided ISSP knowledge and got their

perspective. The main purpose of the media is to help future BSAC students understand more about ISSP and to increase the possibility of interest by promoting living experience and some project details.

Results

Finding#1: The key characteristics of a suitable project center are living logistics, project structure quality, and student interest

From our interview with key stakeholders, we concluded that the key components of a successful project center are living logistics including accommodation, transportation, safety and cost of living. Project structure quality included the workplace, sponsoring organization, local coordinator, project advisor, and students' interest. We used those three components to assess Jakarta as an ISSP project center.

Finding#2: The characteristics of suitable accommodation for students are safety, neighborhood, cost, amenities, accessibility to transportation, and facilities provided.

From researching online booking websites and conducting an on-site investigation of Jakarta and the surrounding area, we come up with key components of suitable accommodation. Safety, neighborhood, cost, amenities, accessibility to transportation, and facilities were the criteria of the evaluation that were weighted differently according to the survey of eight BSAC students who went to Jakarta in January 2019. Among these six elements, safety was the biggest concern for the students with regard to accommodation option, followed by neighborhood, cost, amenities, accessibility to transportation, while the least concern was the facilities provided. Gardenia Boulevard, located in the South Jakarta, was selected as the most suitable accommodation.

Finding#3: Grab car is the most efficient and suitable mode of transport for Thai students based on cost, safety, and availability. However, other options are available such as TransJakarta, BlueBird, and Gojek.

There are four main options to travel in and around Jakarta which are taxi, bus, motorcycle, and train. We considered safety, cost, time saving, and accessibility as our evaluation criteria. We based our conclusion on internet reviews and our actual experience and decided that GrabCar is the most efficient and most suitable for Thai students due to the affordable price, safety, and round the clock accessibility.

Finding#4: Food options in Indonesia are numerous, affordable, and similar in price to Bangkok.

Living in Jakarta is similar to Bangkok. You can easily find groceries. Dining out is very affordable, and the food is clean and safe. With regards to groceries, it is easy and convenient for students to obtain a variety of essential items. For dining out, the price range is between 33 Baht to 212 Baht per menu. This price depends on the location of which you choose to eat.

Finding#5: There is a wide range of potential local organizations that can become partners of the Jakarta Project Center. These organizations are interested or focus in environmental issues, education, and sustainable business.

During our stay in Jakarta, we reached out to eleven organizations that expressed their interest in ISSP. Upon our visit, we described the ISSP model to ensure a complete understanding of our curriculum and helped direct the project suggestions of potential sponsors. We evaluated the likelihood of these organizations becoming sponsors by considering the suitability of the project site, interest in collaborating with students, potential to maintain a sustainable partnership, and availability of projects that match ISSP goals. Possible project themes are: environmental issue, education, and local business development.

Table 1: Examples of possible projects in Indonesia

Organization	Project Theme	Project Example
Rainbow Reading Gardens	Education	Developing an online library for learning in East Indonesia
Dreamdelion	Local Business Development	Promoting and empowering motherhood through competitive marketing of crafts
Rumah Energi	Environmental Issue	Adding value to organic waste
Trakindo	Environmental Issue	Managing oil waste storage

Finding#6: YouTube and Instagram are very effective for promoting the new project center

We presented our discoveries in two media types: YouTube channel (ISSP Jakarta) and an Instagram (jakarta.issp) which aimed to attract future BSAC students to select the Jakarta Project Center. Our analysis showed that the majority of students were interested in the topic and project details relating to Indonesia but had few concerns in areas relating to safety, site location, culture, and cost. We created two promotional methods to foster greater student awareness in the less concerned areas of less concern (safety, site location, culture, and cost). Students showed better understanding with positive feedback on Jakarta project site, and living and culture of Indonesia after viewing our promotional media.

Conclusion

The results of our assessment of Jakarta as a new Project Center are very positive. We believe that Jakarta can be a sustainable project center for BSAC. A set of recommendations was prepared for BSAC including preparations before coming to Jakarta, list of potential sponsors and project sites, accommodation options, transportation options, and a living guide. A Jakarta project site manual for student was created to cover basic preparation, useful vocabulary and sentences, dos and don'ts, tips and tricks, and senior experiences.

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Chapter 1: Introduction

Interactive Science and Social Project (ISSP) is a unique project course of the BSAC program that focuses on the intersection between technology and science within society. This course intends to challenge students by relating social needs or concerns to specific issues raised by technological developments, society and humanity. The students who take this course are expected to develop an understanding of how science and technology are embedded in society. By applying theory to practice in every aspect of their project, they gain practical experience and develop new skills.

Over the past years, ISSP has been doing a variety of project themes all over Thailand. This year, the BSAC program and the Chemistry Department are planning to expand overseas. By expanding to an overseas site in Indonesia, we can learn about different aspects, such as economic growth, industry development, ways to improve basic structures, and others. There can be further opportunities and benefits that we can gain from other ASEAN countries. Also, the BSAC program is interested in having evaluation guidelines for the determination of sustainable future project sites.

According to the Worcester Polytechnic Institute or WPI, Interactive Qualifying Project (IQP) is one of the required courses in WPI. It is a signature project-based curriculum that gives every WPI student the experience of working in interdisciplinary teams that lie at the intersection between society and science. WPI has carried out many worldwide project centers. By adopting similar criteria as the IQP, living logistics and sponsor availability are the two main parameters that we used to define our evaluation.

The ISSPs have been carried on with many projects all over Thailand such as: Chiang Mai, Chiang Rai, Krabi, Ayutthaya, Sa Khon Nakorn, and others. At local project sites, BSAC students did not experience drastic change in cultural and demographic aspects. If ISSP could be carried out in other ASEAN countries, it would create a greater experience for the students by adding cultural diversity in the workplace. IQP has been sending students to different countries for more than 40 years, by pushing the students out of their comfort zone and learning about new things not available in their own country. This practice makes students experience, learn, and adapt to new cultures and also new people as well.

To achieve the project goal which was set to evaluate Jakarta as a new overseas project center, we set our objectives to first identify the characteristics of a successful project center. We collected data on these characteristics and requirements especially on living condition and options, working and transportation logistics, and building a network of the potential sponsors. In addition to our written recommendation, we also produced promotional media and a student manual for Jakarta Project Center for our sponsor's benefit.

Chapter 2: Background

In order for the BSAC program to expand and evaluate the overseas site in Jakarta, our team carried out in depth research about ISSP, case study in expanding sites, Thailand and Indonesia relationship, and the overall information of Jakarta to provide the relevant kinds of studies and techniques as a background for our research.

2.1 ISSP course and BSAC Program

Interactive Science and Social Project (ISSP) is mandatory to all third years students of the BSAC program. This course offers a great learning experience in that students work in teams addressing real-world problems by applying science and technology to serve society and human needs. The majority of BSAC students had opportunities to collaborate with WPI students, while some 25% missed the opportunity to work in high constraint teams. Since the development of ISSP in 2008, some 130 student projects have been accomplished in Thailand, for example, a project titled “Collecting Supportive Research Material for the Duang Prateep Foundation to Negotiate the Relocation of the Khlong Toei Slum” was conducted in collaboration with Duang Prateep Foundation, a long time project sponsor of WPI’s IQP for over 40 years. A project in Northeast Thailand where the team designed a learning center of traditional rice in Sakon Nakhon. According to the objectives of ISSP, students are challenged to work in groups and are asked to solve real-world problems by merging their knowledge and skills. ISSP provides students opportunities to deal with real situations in order to create a solution that has an impact on community or society. By working with the sponsors including NGOs, private companies, or governmental agencies who present a problem statement or business case to students, the teams research, inform, and find the best solution that fits the needs, lifestyle, and desires of the people who are facing the problem and also provide a recommendation to the sponsor.

2.2 Previous IQP Models

The ISSP course is developed based on the model of Interactive Qualifying Project (IQP) of Worcester Polytechnic Institute (WPI) located in Massachusetts, the United States of America, which has 52 project centers around the world.¹ We are going to focus on two case studies that we selected.

2.2.1 Case study 1: Implementing an IQP Project Center in Japan

In this report, WPI students evaluated three cities in Japan: Kyoto, Tokyo, and Hiroshima. The purpose was to provide WPI with a study analyzing all the parameters involved in the establishing of a successful IQP project center in Japan. By assessing the sponsors and living logistics of each area, they developed the standardized forms and scoring systems to determine how well the options fit their criteria. In the criteria, they deeply evaluated each component through different aspects, such as in living logistics including housing options, medical resources, transportation options, and food costs. By comparing and constructing the charts of each city, they concluded that the optimal city would be

Kyoto due to the highest number of potential sponsors and the most effective cost of transportation. Recommendations were added into this report for their sponsor's benefit.²

2.2.2 Case Study: Investigating the Feasibility of a WPI Project Center in Iceland

Recently, WPI has been expanding the Global Projects Program by opening project centers in new locations. WPI sees Iceland as a potential new project center location due to its booming tourist industry, its commitment to cultural preservation, and its active efforts in environmental conservation. A IQP team was asked to investigate the feasibility of establishing a WPI project center in Iceland. Through interviews with the WPI faculty, they outlined the characteristics of a successful project center. This information served as the guideline that led their work as they interacted with potential project organizations and evaluated transportation, living expenses, and housing as WPI students working in Iceland.³

The results indicated that a successful project center required a strong sponsor network with invested center directors and faculty advisors. In the interview with their faculty, it was revealed that certain sponsor sectors are more suitable than the others for coordinating interdisciplinary projects. Due to a lack of resources needed to work on projects full-time and be open to student creativity, WPI students tend to work with non-profit organizations, museums, and government agencies. When finding and contacting potential sponsoring organization, they focused on these sectors through emails, phone calls, and appointments. Additionally, traveling from Akranes, located on the west coast of Iceland, to Reykjavik, proved to be nearly impossible without a car. Transportation is one of the factors that contribute to a successful project center, since it is inconvenient and expensive for students in Iceland, the team recommended WPI to house the students near their workplace. Based on the recommendation of this project, WPI launched Iceland Project Center in 2018. The project has attracted extreme interest from WPI students and faculty.

2.3 Thailand-Indonesia

This year is the first time for BSAC to expand their project site abroad to embrace different culture, new setting, and perspective. Expanding the site to Indonesia allows BSAC to collaborate with ASEAN countries promoting a mutual benefit. Indonesia has been a trade partner of Thailand for a long time, and is Thailand's third-largest trading partner in ASEAN with a trade value approximated at 17 billion in USD. The trading volume between the two countries is constantly growing over the years due to large market share of Indonesia in Thailand's agricultural products. Thailand exports foods such as rice and fruits, and especially durian, tamarind, custard apple, guava, pomelo, mango, and longan to Indonesia. On the other hand, Thailand imports energy commodities, such as coal, oil, and gas from Indonesia.

Indonesia is the 4th most populated country in the world with more than 200 million people, with over 17,000 islands and home to as many as 300 ethnic groups, so it is a very diverse country.

Indonesia has the largest Muslim population in the world. To be more specific, 88% of the population is Muslim, 9% is Christian, and the rest is Hindu and Buddhist. Jakarta city is the capital city of Indonesia located on Java island and home to a large minority of Chinese, Arabic, and Persian population. Indonesians possess many similarities to each other due to the Indian-Chinese culture. Therefore, expanding the project site to Jakarta is very attractive in terms of diversity in demographics, culture, history, and geography. ⁴

2.4 Living logistics in Jakarta

Jakarta is the largest city located on the northwest coast of Java. It is the capital of Indonesia and is the center of culture, economics, and politics. Jakarta metropolitan area or Jabodetabek has an area of 6,392 square kilometers with a population exceeding 30 million. The criteria for BSAC to evaluate the establishing of a new project center in Jakarta are living logistics, transportation options, and sponsor availability.

2.4.1 Accommodation

In order for housing to be considered suitable, it must be safe and affordable. Although there is a wide range of accommodation used for student housing, most students options are either staying in hotel rooms or apartments. Apartments have an advantage over hotel rooms in that they provide students with a kitchen. This may help with the cost of the ISSP because instead of spending money going out to eat, students can cook their own food from the groceries they purchase. The cost of accommodation in Jakarta varies greatly depending on the type, facility and location. Most of the apartments in Jakarta are located in Kuningan, Cilandak, Pondok Indah, Thamrin, and Tanjung Duren districts. ⁵

2.4.2 Transportation

In the metropolitan area of around 30 million people, Jakarta has a variety of transport systems. However, Jakarta is still strained by traffic jams during rush hours. In order to travel around Jakarta, there are five transportation types:

- **TransJakarta/Busway:** It serves as a Bus Rapid Transit (BRT) system in Greater Jakarta. The buses run in their own lane which free from traffic jams. The system runs through 13 corridors and passes many landmarks around the city.⁶
- **Taxis:** The most popular taxi company is “Blue Bird” which is pretty prevalent on the streets of Jakarta. There are also online Taxis of which the most notable one is Singapore-based Grab.
- **KRL Commuter Jabodetabek:** The boarding the train provides transportation in Jakarta, Bogor, Depok, Tangerang, South Tangerang, and Bekasi. The trains are all air-conditioned, clean, and safe. They also have special carriages designated for female passengers for extra convenience.⁷

- **Soekarno–Hatta Airport Rail Link:** It is a new transport system that has operated since 2018. It connects the city center of Jakarta to the main international airport of Jakarta just the north of the city. There are only 6 stations presently with more being proposed.
- **Motorcycle taxi:** It is one of the most common forms of public transportation in Indonesia during heavy traffic. There are two app-based companies which are Grab bike and Gojek running this transportation.⁸

2.4.3 Culture

Greeting: The most common formal greeting is "shaking hands" followed by the word "Selamat". Some people will also bow their heads slightly or place their hands on their heart after shaking hands. When you are being introduced to someone, you should greet the eldest or the senior person first and it's very important to use that person's title not their real name because many Indonesians view the title as being important in that it signifies status.⁹

Communication Style: Indonesian people are very serious about how to speak to others and usually appreciate people to speak softly. A loud person is considered aggressive. They are very careful of how they speak and interact because they don't want to cause shame or to hurt others' feelings. To save face, they will not humiliate or publicly blame a person or directly disagree in front of others; instead, they will speak with them privately and in fact, in the national language of Indonesia which is Bahasa Indonesian there are 12 different ways to say no or refuse. From this information it can be deduced that people hide their negative feelings, avoid confrontation and rarely raise their voices.

Values: Hierarchical principles are used; sometimes the word "bapak" and "ibu" which is the equivalent of "sir" and "madam" is used to address people who are more senior.

Prohibition: There are also restrictions or actions that are felt to be unacceptable in Indonesian society including avoiding eating, passing dishes, or handing over something with the left hand because people consider it is unclean. This custom also includes shaking hands with the left hand. It is also advised to avoid pointing feet at anyone or anything because feet are considered the least sacred part of our body by the locals. As in Thailand, Indonesians also don't like people touching their head.

Language: Bahasa Indonesia is the official language of Indonesia. There are also over 300 different native languages which are spoken in Indonesia since it is a large country. While Bahasa Indonesia is the official language of Indonesia, it is the mother tongue to only less than half of the total population. However, many people still have a good perception of English, which is also spoken by some citizens; mostly the younger generation and mainly people who work in the tourism sector. A study showed that if a person can speak English, he or she will advance in work and status.¹⁰

2.4.4 Food

For the manner of eating, Indonesians use their right hand only for eating or eat with a spoon and fork like Thai people. A typical Indonesian meal consists of steamed rice and some dishes made of fish, meat, chicken or vegetables, and sometimes also soup which are served together. A common side dish is Sambal which is a hot sauce. Moving to the Hawker food, which is also known as street food, there are street vendors who peddle their food on their 3-wheeled carts. These stalls are known as “kaki lima”. Many of these vendors have their own distinctive calls to announce their wares ranging from drinks, sweets, rice and noodles. Each kaki lima vendor sells only one dish and many sell mee bakso. A popular Indonesian dish is satay (pronounced sah-tay) served with peanut sauce, ketupat (pronounced ke-too-paht), cucumber and onions. Other popular foods are soto ayam, tahu telur, otak otak, nasi goreng, gado gado, and kerupuk. Since most Indonesians are Muslims, their religion prohibits eating pork; hence pork is rarely seen in this country. The desserts often consist of tropical fruits such as star fruit, mango, mangosteen, rambutan, durian, and jackfruit. Indonesian desserts are also often made from glutinous rice flour, palm sugar, and coconut milk.¹¹

2.4.5 Healthcare Service

Hospitals in Jakarta can be found all around the city. The public hospitals which are in the city are considered overcrowded, waiting times will be long and some have low standards of staff and facilities. The government has a low investment in healthcare in comparison to its neighboring countries. Indonesian authorities have begun to implement a universal health insurance scheme through a wide network of public health centers. However, foreigners do not benefit from this scheme, and it is therefore essential for foreigners moving to Jakarta to arrange comprehensive health insurance.¹¹ Those arriving in the city as part of a corporate relocation package will most likely have their company organize and contribute towards this. The private hospitals, which play an important role in providing healthcare, are better equipped and tend to be more expensive, have better quality, and have a higher standard than public hospitals. Most of the staff can speak English. Most foreigners choose to use the private hospitals instead of a public hospital, or some will go as far as Singapore for better treatment. Pharmacies are plentiful in Jakarta and can easily be found in most large malls; these sell a wide range of prescription and over-the-counter medication. They also provide a pharmacist to assist customers at every store.¹²

2.4.6 Sponsorship

Sponsors are the individuals or organizations that provide challenges for students to solve real-world problems related to scientific and social dimension, involving global issues. Knowing the background, history, and organization mission of the sponsor can help us efficiently determine their potential.

According to the successful off-campus project center of IQP, the sponsor's ability to provide compelling projects for students is one of the key factor. The project must be available in great enough quantity while remaining consistently appealing to students for a project site to prosper. In this way, ideal project sponsors must balance quality with quantity in their project offerings. Moreover, because project centers are meant to function annually, sponsors must be able to provide the projects on a consistent basis over many years. In addition to providing compelling projects on an annual basis, sponsors should provide some logistical requirements, such as providing a suitable workplace for students and providing a liaison to meet with the students.¹³

Chapter 3: Methodology

To help the BSAC program and the Chemistry Department understand the feasibility of the new project site, the project goal is to assess Jakarta as a suitable overseas project center. By evaluating this, we have broken down our goal into these objectives:

- 1) To understand the characteristics of a successful project center
- 2) To evaluate suitable living and logistic factors for students
- 3) To create and document a network of the potential sponsors
- 4) To produce media for promoting the ISSP in Jakarta

3.1. To understand the characteristics of a successful project center

Identifying key components of a sustainable project center is essential. We conducted interviews with some experts who are experienced in project education including the Co-Director of the WPI Bangkok Project Center, WPI Bangkok Project Center professors, and some previous ISSP project advisors. We sent out interview questions (see *Appendix A.1 and A.2*) via email and Google survey to obtain answers. Then, we collected, and analyzed the answers to set evaluation criteria of a successful project center and to set a baseline for the evaluation of Jakarta.

To obtain a realistic understanding of students' perspectives towards the ISSP course, their preferences for doing local and overseas projects, and their priorities in determining their options, we sent survey questions (see *Appendix A.3*) to BSAC sophomores and freshmen.

3.2. To evaluate suitable living and logistic factors for students

It was pre-determined when we first set out to work on the project that living logistics are the most important characteristics of a sustainable project center. Living logistics includes accommodation, modes of transportation, and food cost. Our team interviewed BSAC students who went to Jakarta this year including our team and the CropLife team. The interview data were used to set a ranking score for evaluation criteria as stated earlier.

Our team searched, walked, and visited the accommodation on a daily basis. We toured each facility and their rooms in order to analyze the areas the students could live in. Moreover, we visited the apartment and hotel websites, if available, because they contain reviews and feedback from other customers regarding the service and stay. To evaluate each housing option, our team created the checklist to ensure consistency and made comparisons. Six living criteria were set as follows: safety, cost, apartment amenities, facilities, neighborhood and access to transportation.

To determine the suitability of each traveling option, we researched the cost, safety, availability, and efficacy of different modes of transportation students would use for regular travel within Jakarta. This regular travel includes going from students' housing to their sponsor every day and other necessary locations such as grocery stores. We accomplished this by estimating the weekly

cost of regular travel based on current mass transit rates in terms of Indonesian Rupiah. Also, data were recorded and collected through our four weeks experience in Jakarta.

Food costs are another essential element for the health and well-being of the students. Different types of foods are available in Jakarta. Expenses, and personal preferences were noted on a daily basis. Food safety quality, taste and hygiene were also evaluated. Since the overall cost of doing overseas project is one of the concerns for students, we collected all expenses during our four weeks in Jakarta and estimated the average monthly cost. We then compared the living cost in Jakarta to Bangkok.

3.3 To create and document a network of the potential sponsors

The availability of good projects and accessible sponsors are an important factor for a sustainable project site. Before we researched and contacted organizations in Indonesia, we set up an estimation criteria by conducting literature reviews and from interviews as mentioned in Objective 1. We sent emails (see on *Appendix E*) which contained an introduction of the ISSP together with a promotional media and our proposal. After we received a reply, we made interview appointments for in depth conversation with the organizations and about possible projects. Based on subjective observations and interviews, we evaluated each sponsor based on their willingness to collaborate, their offer, and also if their suggested projects would create any impact on the communities or society in order to identify a potential organization for the BSAC program. Contact name, telephone, e-mail, project names and details were collected.

3.4 To produce media for promoting the ISSP in Jakarta

An additional component of our project is to develop media materials, including video clips and an Instagram account, to promote the ISSP course, and give students a snapshot of the future projects and living in Jakarta. We also raised awareness regarding areas of less concern to the students' from the survey result from objective 1 to create the main video content supported by some results in objectives 2 and 3. The promotional media was created using videos and photographs taken throughout the time we spent in Jakarta. While releasing these promotional media, we sent post-surveys to obtain feedback from students and compare the data from the pre-survey in objective 1 as well. The video was released on our YouTube channel because everyone can access it and the Instagram account which is also a popular social media for teenagers.

Chapter 4: Results

Findings were analyzed from data collected during our stay in Jakarta and are divided into four categories.

1. Findings related to characteristics of a successful project center
2. Findings related to living logistics in Jakarta
3. Findings related to the potential sponsors and possible projects
4. Findings related to promotional media

4.1 Characteristics of a successful project center

Finding#1: Key characteristics of a suitable project center are living logistics, project structure quality and student interest

In our interview with Richard F. Vaz who has a long experience in expanding IQP project centers, Gary Pollice, a WPI professor who came to Thailand this year, and Dr. Nattapong Paiboonvorachart who was a past ISSP advisor, we concluded there are three key characteristics of suitable project center.

First is living logistics. When sending the students abroad, they must be kept safe and healthy. We then focused our research in the area of safety, transportation and accommodation. The faculty require this information which should be updating every year especially in regard to safety which might negatively affect the students wellbeing.

Another important factor is “project structure quality” including sponsor availability, project detail, workplace, advisors, and coordinator. The project center will not be sustainable if there is no sponsorship to give the problem statement which should create fundamentally changed in terms of understanding the point of view on a worldlier basis, self-improvement and experiencing a new culture for the students after they had done the projects. Additionally, having a workplace in the sponsor’s office is good because students can directly and frequently contact and obtain feedback from the sponsor. Moreover, project advisors have an important role for guiding and making suggestions to the students during the overseas project. The local coordinator can help the faculty identify sponsors, suitable housing, and provides logistic assistance to students prior and during their time in Indonesia.

Lastly, we also found from the interview with Richard F. Vaz that WPI had trouble maintaining their project site in Hangzhou, China, due to lack of students and advisors’ interest. As a result, “student interest” is another element needed for a suitable project site.

4.2 Living logistic in Jakarta

This section presents the data we gathered from daily recording in our notes and contents of our analysis of that data. Since we stayed in Jakarta for about one month, our team created the “Cost

Breakdown” chart to give an overall picture of the total expenses. It consists of a variety of costs for living in Indonesia for one month. In Figure 1, the highest percentage of 57 percent is accommodation. It is the rental price of each unit that includes the cost of utilities (water and electricity), followed by 26 percent of food costs, including food and necessary supplies, local outlet, and medium priced restaurants. Lastly, transportation portion is of around 17 percent of the total.

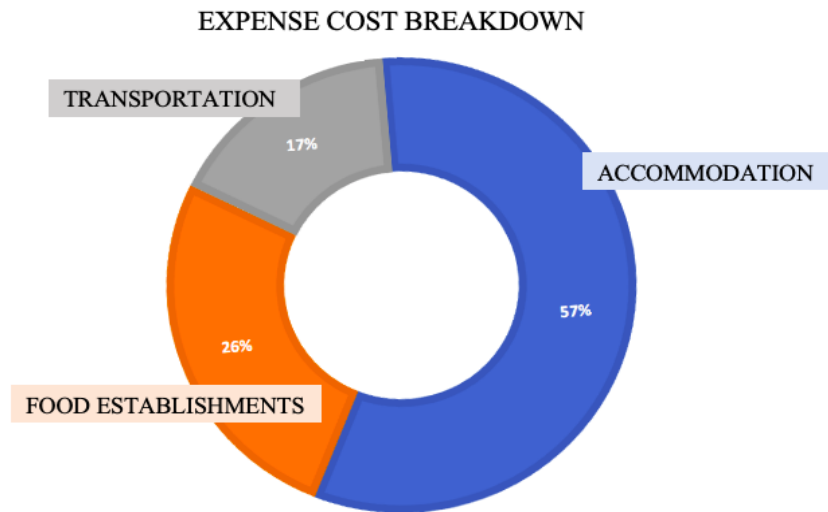


Figure 1: Average expense cost breakdown for a one-month stay for four BSAC students

Finding#1: The characteristics of suitable accommodation for students are safety, neighborhood, cost, amenities, accessibility to transportation and facilities provided.

For the accommodation that we inspected in many areas in Jakarta especially in the south and the east district, we found 9 apartments and hotels that are suitable and not too far from the potential sponsor offices as shown in *Figure 2*.



Figure 2: Location of the accommodations in Jakarta

The south and the east district are areas which are regarded as the new town of Jakarta meaning that these areas are already developed with new accommodation and new office districts which contain large number of firms relocated from the inner city. We also considered many factors in selecting the suitable accommodations including safety, apartment facilities, amenities, nearby neighborhood, the accessibility of the transportation system and the most importantly, the price of the accommodation.

After we compared each apartment and hotel together, we found out that Gardenia Boulevard apartment met much of the set criteria. It is located in the South district of Jakarta (near Trakindo) where the cost of living is lower than the other parts of the city. These apartments are fully furnished with kitchen and living room except for the studios. There are 3 types of room, which are Studio, 1-Bedroom and 2-Bedroom, with price ranges from 600-800 baht per night. They provide free internet connection which is essential for students work in the future projects. For safety, this apartment offer a security guard and key card accessible elevator. Moreover, this apartment has a large swimming pool and a fitness center. The advantage of this apartment there is a TransJakarta bus station in front of the apartment and it is a 5 minute walk to the nearest shopping mall. This apartment must be reserved at least two months in advance and can be booked through Airbnb.

Other apartments are Signature Park Apartment Tebet and Signature Park Grande located in Tebet district of South Jakarta. These two apartments are near Croplife, one of potential sponsors. For safety, both apartments provide security guard, keycard access, and fire sprinkler. For facilities, they offer fitness center, minimart, and laundry within the building and with a restaurant nearby. For the apartment amenities, both apartments are listed in Airbnb so different rooms might have different amenities. A living room which is necessary for working are included in 1 and 2 bedrooms type but not in the studio room. Internet connection, may or may not be offered in most rooms. There are shopping malls, supermarkets, restaurants and a park near the apartments as well as a police station and a hospital. Both are located near the TransJakarta bus station. Prices are based on types of room just like Gardenia Boulevard (see on *Appendix B*).

Finding#2 Grab car is the most efficient and suitable mode of transport for Thai students based on cost, safety, and availability.

We tried four types of transportation which include the Grab/GoJek cars and motorcycles, Bluebird taxi, and TransJakarta bus. All of this transportation are fundamental to our work logistics. We needed to travel around the city to conduct surveys, visit sites and meet with potential sponsors around town. To determine the most suitable transportation options, the eight students participated in ISSP 2019 expressed their concerns with regards to the transportation in Jakarta as expressed in *Figure 3*.

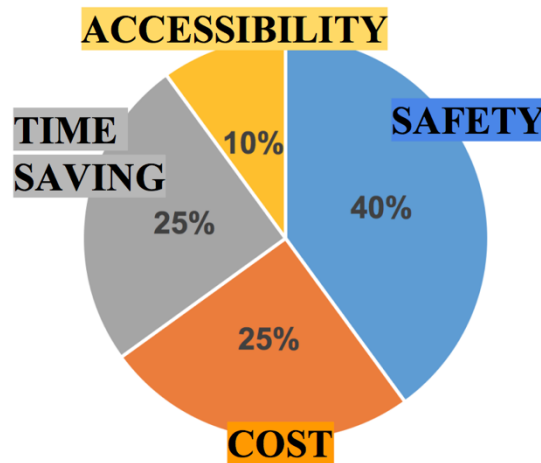


Figure 3: Top concerns about transportation options in Jakarta

We used these four criteria to evaluate transportation options in Jakarta and identified that Grab car is the top option due to the cost. Jakarta Grab fare is fixed, regardless of the traffic. There is also no cancellation fee so if the driver is too far from you, you can cancel this booking and find a new one. When comparing the Grab fare in Jakarta with Bangkok, it is a lot cheaper. For a distance of 1.6 km, the Grab fare in Bangkok can cost up to 80 baht but in Jakarta the fare is at around 45 baht.

Jakarta is regarded as one of the cities with the worst traffic jam in the world. During rush hours, it can take an additional 1-2 hours to reach a destination under normal traffic. The driver will use Google map to select the best route avoiding traffic and take us to the destination as quickly as possible. Grab Jakarta offers a friendly mobile application for booking. The application is easy to use especially for a first-time user. Grab operates all over the city and can pick up passenger at anywhere. For safety, which is the top concern Grab uses a family car or minivans which are larger than most taxis. Every car is equipped with seat belts, and all the cars are in good condition.

There are other transportation options too, such as Bluebird and TransJakarta. Compared to Grab, these transportation types are not convenient and efficient for commuters. Bluebird has a higher price rate and drivers can easily cheat on the meter, and Transjakarta isn't suitable during rush hours.

Finding#3: Food options in Indonesia are numerous and the cost is affordable and on a par when compared to the same lifestyle in Bangkok.

We recorded our purchases and prices of groceries and dining out. For groceries, it was easy and convenient for our team to obtain essential items. The supermarket near our apartment contained a variety of items such as cleaning supplies, toiletries, and food, such as raw and cooked foods. There is an Indomart located under our apartment that provides fresh cut fruit, eggs, and instant noodles.

The total cost per one student of grocery shopping was approximately 5,376,000 RP or equivalent to 12,000 Baht (currency conversion rate by Superrich, Feb 7, 2019), which already included tax. There are some missing items that weren't recorded, so the estimation of the standard

deviation was approximated to 40,000 RP or equivalent to 90 Baht. This number varied among students depending on type of products and brands purchased, location and quantity purchased.

Outside dining was separated into two categories, which is the local outlets and the medium-priced restaurants. Even though there are some differences in price between these two categories, both are affordable and safe to eat in. For local outlets, we have tried food on the Tebet Road behind our apartment and also the tourist places which we visited. The price ranges between 15,000 RP to 30,000 RP or equivalent to 33 Baht to 67 Baht per person. We rarely paid over 35,000 RP. Medium priced restaurants are mostly found in shopping malls such as Kota Kasablanka or Grand Indonesia. Most of the restaurants in the shopping malls include 15-17 percent service charge and taxes that made the price slightly higher than the local outlets. An addition of approximately 20,000 RP for service charge and tax is still very affordable since it is equivalent to 45 Baht. *Appendix C*, shows the price range of different restaurant types and some of the items in the local grocery stores.

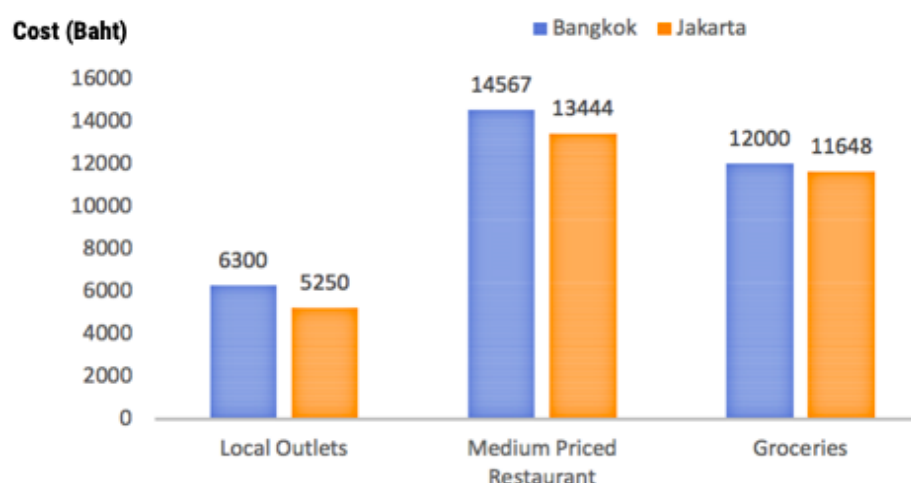


Figure 4: The average price between Bangkok and Jakarta based on four BSAC students

We also recorded our daily food expenses in Bangkok, which we compared to food expenses, in Jakarta, see *Figure 4*. The vertical axis is the price in Baht and the horizontal axis is the food types. The data from this graph is a one month average cost of eating out and groceries of 4 students. The graphs indicate very similar food and grocery cost between Bangkok and Jakarta. This slightly difference didn't affect our living. We felt no difference in the price when buying food in Jakarta.

4.3 Sponsor network and possible projects

Finding#1: There is a wide range of local organizations that can become partners of Jakarta Project Center.

We separated potential organizations that we contacted into three types which are NGOs, private companies, and governmental organizations. We initially researched 200 organizations in Indonesia but 70 of them met our criteria which are the organization should not be too big or too small,

and should be interested in a CSR project. We contacted 70 organizations located not only in Jakarta but also in other cities such as Bali and Yogyakarta.

There were 11 organizations that responded six agreed to meet with us as shown in *Table 1*. For large organizations or government agencies, none of them replied to us except for the one with which we already had a connection. Even though only 16% replied our email showing interest, it was enough for expanding the project site.

Table 2: Responses from organization based on category

Category	Contacted	Reponses	Meeting
Private business	37	4	4
NGOs/non-profits	27	7	5
Government	6	0	0
Total	70	11(16%)	9(13%)

The main type of potential and possible sponsors are non-profit organizations (NGOs) who expressed interest and showed appreciation to collaborate with us. These organizations are State University of Jakarta, Hrd PEKKA, Dreamdelion, Rumah Energi, in Jakarta and Rainbow Reading Garden, YEL, and Apikri in other cities of Indonesia.

The key for contacting private companies was through a personal connection. We contacted four private companies including Trakindo company whose CEO was an alumni of WPI, eCEOs which is consultant company, SCG Chemicals, and Croplife Indonesia, so it was not difficult to make an appointment and interview them.

We met with 9 of those organizations. During the meeting, we developed a presentation to introduce ourselves, an introduction of ISSP, and the roles of the sponsor. We included information about the timeline of this project, the past work, and the benefits of sponsoring. While showing the presentation and the poster (see on *Appendix F*), it proved to be more effective than a discussion via message or interview. After the end of the presentation, those potential partners told us about themselves including organizational background, past projects and mentioned some problems which indicated their interest in working with our program. Lastly, we had some discussions to confirm that we shared the same direction understanding.

After visiting and interviewing with the 9 organizations, we weighed the suitable sponsors using the evaluation form including the sustainable partnership, community impact, interest in collaboration with the ISSP program and suitability, and the results (see on *Appendix G*). Mainly all of them were able to provide a workplace for students and most of them came up with projects related to helping communities or society.

Finding#2: Potentials organizations are interested or focus in environmental issues, education, and sustainable business which match the interest of BSAC.

Each sponsor that we met presented many of their own project ideas to us depending on their needs and we found several project themes emerged. We separated the project topics into three themes including environment issues, education, and local business development shown in *Figure 5*. Most of the topics are also related with appropriate technology and social and community development in different areas or fields depending on the concerns of each organization.

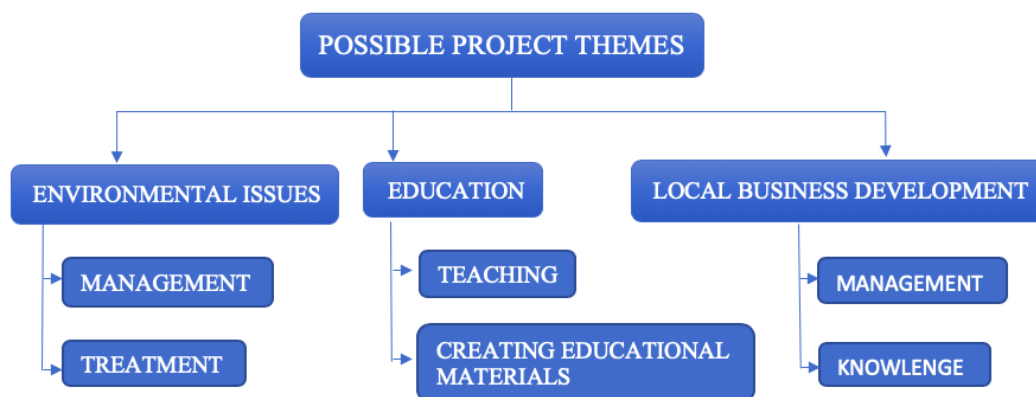


Figure 5: The sector of possible projects

In our interview and discussion with possible partners, we concluded the main project theme in Indonesia is “environmental issues”. This theme a major concern around the world. We split the topics into Management and Treatment. Environment management including “waste management”, a topic concerning reusing or recycling the strong smelling garbage present in the Rusunawa area where people live crowded together and about adding value to the organic waste of which Indonesia produces eight million tons per day. SCG Chemical suggested a project that could have an international impact such as collecting plastic waste to build plastic roads. As for environment treatment, there are several issues including "water pollutants in the rivers from industries", "water recycling" in Trakindo factory, “green environment project” in schools, and “creating an Orangutan Haven in Sumatra”.

Indonesia has a large population and a large land area, so the standard of education is another problem especially on some islands or outside cities. There are not enough schools, facilities or teachers for students which has been the focus of many organizations. We separated the issues on education into two topics. First is "Teaching project" to teach basic skills to children in Serpong school and Rusunawa area for better life in the future and another topic is “Creating projects” including “building a library” in Eastern Island and “facility management” in Serpong school.

Lastly, local business development for management and knowledge is another option. Business management issues are directed by eCEOs, a consultant company, to “hiring outsource before or after customers order”. Education of business knowledge such as business plans, keeping demand and being

a sustainable supplier which is a project from Rumah Energi, Dreamdelion, and Aplikir are also available.

4.4 Promotional media

Finding#1: The main factors influenced project site preference for BSAC sophomore and freshmen are project topic and project detail while the less influential factors are culture, site location, safety and cost organizations.

In our students' survey, we summarized the factors and expectations for choosing the project abroad for BSAC sophomore and freshman students. The deciding factor is "topic and project detail" which means that if the overseas project center has an interesting project, students will decide to go there. In the other hand, culture, site location and cost are of less concern to BSAC students and safety is of the least concern, while it is the highest concern of our professors.

Finding#2: BSAC sophomore and freshmen know nothing about ISSP and BSAC should do something such as organize a promotional fair or produce promotional media.

A pre-survey was conducted during the first week of January, the results show that BSAC students had an unclear perspective, no knowledge about ISSP course and were confused about the ISSP and APP CHEM project while all WPI students knew about IQP, a similar course to ISSP. This is because in their first year WPI has an educational fair to promote IQP every year, with a senior sharing experience in each project center and also the detail and information about previous projects are displayed on WPI's website.

Moreover, BSAC students have a negative perspective about Indonesia. When talking about Indonesia, they only think about Bali, although the capital city is Jakarta which is a fascinating city. Also, the living in Indonesia wasn't attracting by the students.

Finding#3: Currently, YouTube and Instagram are the most effective media for enhancing the understanding of BSAC students

The contents of the video in YouTube are mainly focused on the topic and project details that students can do in Jakarta which motivated student to participate in ISSP there. There was also some information on living logistics such as food, culture and transportation from our experiences included. On our official Instagram account, we shared the photos and videos that connected students to our daily activities and lifestyle in Jakarta. It enhanced the opportunity for future BSAC students to see the potential of a possible project center in Indonesia. Our team has been updating the posts since the beginning of the trip, and some first and second year students visited our account. Moreover, some students directed message to our account to ask for more information about this project. They wondered what we were doing, how we did the project, and what ISSP is about.

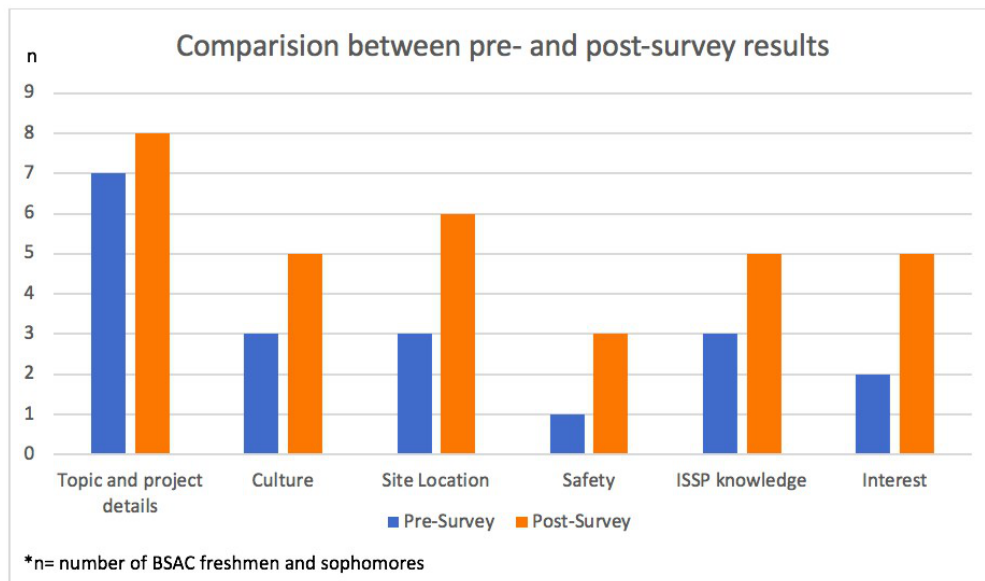


Figure 6: Comparison between pre- and post-survey results

We sent the link to access our two social media accounts shown on *Figure 6* with post survey questions to BSAC sophomore and freshman students. There were positive responses, after they watched the video and looked at the Instagram account. The survey results showed that students have a clearer understanding about ISSP, a more positive perspective about Indonesia and are interested in seeking experience in the Jakarta project center.

Chapter 5: Conclusion and Recommendations

In this chapter, we present our conclusion and recommendations based on our personal experiences, data and analysis in Jakarta. During our one month stay, there were many aspects that we learned about. Through our findings we have concluded that Jakarta is an appropriate location for a sustainable project center for the ISSP program.

Based on our survey and interview results, we found that BSAC students and ISSP professors were concerned about the assessment of the project center in Jakarta. According to our experience, the project center in Jakarta has suitable housing options, a variety of food venues, convenient transportation, a safe atmosphere, helpful local people and an affordable living cost. The overall cost per student will vary depending on their personal preferences and the prevailing rates at the time. Our team concluded that the living expenses in Jakarta are very similar to Bangkok. Furthermore, there are potential sponsors who are willing to work with BSAC students on studies related to the environmental issues. Lastly, we created a video clip and manual book about preparation before coming to Jakarta. After the video clip was released, several students had a better understanding about ISSP, and they were interested in participating in the ISSP Jakarta project center.

5.1 Recommendations to BSAC students

Recommendation#1: Choosing Jakarta or Bangkok project center

Both options have their own pros; we recommend that the choice is made based on the students' expectations. At the Jakarta project center, students will learn a new culture and obtain a new view of the world, while at the Bangkok project center, students will develop English skills with native speakers and receive attentive advice from both BSAC and WPI professors.

Recommendation#2: Travel experience

A group tour would be an interesting way to entice students to go to Indonesia. Although, Jakarta is a business city, students can travel to other cities such as Bali and Yogyakarta by plane which is affordable price and convenient.

5.2 Recommendations to BSAC program based on our experience in Jakarta.

Recommendation#1: Proposal course

We thought that "project proposal" course is not of enough benefit for the projects. We recommend that the BSAC program should have a course twice a week like ID2050 of WPI. This course taught students to learn how to do social science research, develop objectives and analyze qualitative data. We thought that it might help students to understand more clearly about their tasks and how to write a report reducing the time that the advisors must spend on explaining to each team during the course.

Recommendation#2: Language preparation course

From our experience in Jakarta, most of the people here can speak some degree of English, but not everyone is fluent in English. We would like to recommend that the BSAC program arrange for a class of Bahasa Indonesia to students by a native speaker before going to Jakarta, such as a 1-hour class 2 or 3 times a week after school for 1 or 2 months. The language course should include some

useful vocabulary, sentences and also counting as it would be very helpful. It is not possible to talk or ask locals for directions if they can't speak English.

Recommendation#3: Advisor in Jakarta

While we are working abroad, our professor only stayed temporarily in Jakarta. If we experience many problems related to the project such as having a misunderstanding about the task and the timeline of the project, we had to send a message through Line or Whatsapp to the Professor to ask for advice and information on the problem. Sometimes we had to wait for the response but if the Professor had been permanently based in Jakarta with us, it would be easier to communicate with each other as the student could directly ask the Professor which would help the student better understand the task that was given to them. Apart from the project problem, there is another problem that is unrelated to the project which the student faced from the perspective of the parents. If there was a Professor to look after us, our parents would be happier that their children were well taken care of. It is better to have a professor staying throughout the trip to guide and help the students.

Recommendation#4: Number of students in a team

The number of students on the Thailand project based team is 7 or 8 compared to the Jakarta team which only has 4 members per team, which is a drawback for the Jakarta teams. The problem is that when we brainstorm, our ideas will be less diverse than other teams. We feel that if we had the same number of students as the Bangkok based team, it would be much easier and more flexible to work on the project. Since more people in the team can accomplish different tasks at the same time and can generate more ideas and creativity, we would like BSAC to evenly distribute the number of students in each team.

Recommendation#5: Supporting budget

Internet access is vital for students overseas due to researching for information, sending report files and conducting online meetings with the Professors in Thailand. We would like to recommend BSAC should provide some budget to support the internet access cost in Jakarta; the students in the Bangkok based project have access to the Chula-Wifi at no cost.

Recommendation#6: Sponsoring next year

We recommend that next year's project should be sponsored by Trakindo Company as they have several facilities and staff available for students. We also have strong and trustable network connection with the CEO of Trakindo. Trakindo is a big private company which has many branches in Indonesia, and there are several project themes and topics available for ISSP not only next year but also in the future. Moreover, Trakindo is like a parent company which has many daughter companies in various fields. Therefore, if the BSAC program has completed a successful project with Trakindo, her daughter companies would also be interested to collaborate with the ISSP course in the future too.

Recommendation#7: Passport and Visa

With regards to passport and visa, Indonesia has given a 30 day visa exemption for passport holders for 169 countries including Thailand for 30 days, but it can't be extended or converted into

another stay permit. The Visa that students need for the ISSP project is the tourist visit for which we must apply for at the Embassy of the Republic of Indonesia or the Thai Consulate and submit the following documents: The fee for the visa is US\$ 50 per person, the recommendation letter from the BSAC program, and the letter of invitation from the possible sponsor organization for students. The processing time is about 2 working days.

Recommendation#8: BSAC students collaborate with UNJ students

BSAC students should have some potential UNJ students who are qualified to work with a BSAC student or take a course credit for translating when they visit the provincial site; exchange of culture and ideas is also a benefit. Local people might understand and know the insights of the problem more than foreigners such as BSAC research students

5.3 Recommendation to expanding new overseas project center

Recommendation#1: Creating network sponsors before arriving

We would like to recommend that as much promotional media, introduction letters as possible are sent to organizations in that area before sending teams abroad. It will reduce the tasks in finding and researching organizations as some organizations take a long time to respond a agree to meet for a discussion. NGOs, non-profit organizations or big private companies are the main targets.

Recommendation#2: Evaluate accommodation

The best way to know the insight on the accommodation is stay there for two or three days because surveys and interviews are not as good as self-experience.

Deliverable

Since this is the first year for BSAC program sending students abroad, we have encountered several unexpected situations. By knowing these things beforehand, it would help students to handle and deal with the situation. To provide future BSAC students with preparation for the overseas project, our team came up with a manual booklet. Inside this manual, it consisted of basic preparation, useful sentences, do and don't, tips and tricks, and our interview experience in Jakarta. For basic preparation, our team included the most efficient way of exchanging money, the mobile network, and also passport and visa. Aside from this, there will be additional things that gave advantages and benefits to the students.

REFERENCES

1. Meldrin, J, A.; Morrison, E, A.; Stanley, F, P. An Interactive Qualifying Project Report Submitted to the Faculty of the Worcester Polytechnic Institute. *Helping WPI students Make Better IQP Choices*. 1-80.

2. Barber, A.; Chao, D.; Enyedy, A.; Alvarez, F, D.; Nakamura, Y.; Sanchez, F.; Shumway, H.; Ward, T. Interdisciplinary Global and Student Division. Implementing an IQP Project Center in Japan. **2018**, 1-152.
3. Dupuis, J.; Hartshorn, A.; Ostapenko, A.; Zellerbach, K. Investigating the Feasibility of a WPI Project Center in Iceland. **2018**, 1-43.
4. Irawanto, W, D. An Analysis Of National Culture And Leadership Practices In Indonesia. *Journal of Diversity Management*. **2009**, 4, 34-54.
5. Suswandari, S. Local History of Jakarta and Multicultural Attitude. *Journal of Education, Teaching, and Learning*. **2017**, 2, 93-100.
6. Primatama, M. Tipping points on transport and behaviour: Examining Bus Rapid Transit system in Jakarta, Indonesia. *Advances in Social Science, Education and Humanities Research*. **2018**, 165, 51-55.
7. Turner, J. Case study prepared for Global Report on Human Settlements 2013. *Urban Mass Transit and Social Sustainability in Jakarta, Indonesia*. **2013**, 11, 4-15.
8. Susilo, O, Y.; Santosa, W.; Joewono, B, T.; Parikesit, D. A reflection of motorization and public transport in Jakarta Metropolitan area. *IATSS Research*. **2007**, 31, 59-63.
9. Moffatt, A. An initiative of HACC Multicultural Advisory Service. *Indonesian Cultural Profile*. **2012**, 21, 55-79.
10. Murtisari, T, E.; Mali, G, C, Y. Impact of English on the Indonesian Language and Culture: High School Students' Perceptions. *Studies about Languages*. **2017**, 30, 90-104.
11. Lanjouw, P.; Pradhan, M.; Saadah, F.; Sayed, H.; Sparrow, R. Poverty, Education and Health in Indonesia: Who benefits from Public Spending?. *Policy Research Working Paper*. **2001**, 34, 21-38.
12. Mahendradhata, Y.; Trisnantoro, L.; Listyadewi, S.; Soewondo, P.; Marthias, T.; Harimurti, P.; Prawira, J. Health Systems in the Transtition. *The Republic of Indonesia Health System Review*. **2017**, 7, 78-92.
13. Worcester Polytechnic Institute. *Interactive Qualifying Project Learnings Outcomes*

Appendix

Appendix A: Interview question

A.1 WPI Professor

1. How long have you been director of the Bangkok Project Center:
 1. What works well about this site? What doesn't? Why?
 2. What are your top priorities for how a site runs?
 3. What do you think contributes to the success of the Bangkok Project Center?
2. In developing a project center, what is most important to understand? and What kinds of impacts can projects may have?
3. How do you measure how successful a project center is?
4. Before you and your students come to Thailand, how do you prepare yourselves and what do you provide to your students? (Do you offer any preparation course?)
5. What do you think about expanding project site? What is your first priority factor?
6. What is most vital to a project center's sustainability?
7. Do you visit any other project center? Where is it? What is the similarities and differences compared to Thailand and WPI.
8. What is the most popular project site for IQP projects?. What do you think contributes to its success?

A.2 Advisors of ISSP project

1. What do you think about ISSP project?
2. How long have you been BSAC advisors for ISSP projects?
3. As Advisors of ISSP project, what drew you to be and why is ISSP is so successful?
4. How is WPI's Projects Program different from typical study abroad programs? a. In your experience, how have you seen potential sponsors react to the program?
5. What do you think about the different between BSAC and WPI students?
6. What are the lack of skill of BSAC students?
7. What do you hope student learn and receive after the end of project?
8. Tell one memorable story about ISSP project?
9. Any suggestion or expectation when BSAC expand aboard project site?

A.3 BSAC 13 and 14

1. What you want to know before going abroad for do ISSP?
2. What is you think about indonesia?

3. Are you prefer on or off country project?
4. What is the factor of choosing off country project?

Appendix B: Lists of accommodation with some basic information and accommodations score

B.1 Lists of accommodation

Table 3: The lists of all suitable accommodation in Jakarta

Housing Name	Type	Number of People	Near Transportation	Near Minimart	Near Sponsor	Prices/ Day
Gardenia Boulevard	Studio	2	Yes	Yes	Trakindo	600 Baht
	1 Bedroom	2	Yes	Yes	Trakindo	700 Baht
	2 Bedroom	4	Yes	Yes	Trakindo	800 Baht
Signature Park Apartment	Studio	2	Yes	Yes	CropLife	600 Baht
	2 Bedroom	4	Yes	Yes	CropLife	800 Baht
Signature Park Grande	Studio	2	Yes	Yes	CropLife	600 Baht
	1 Bedroom	2	Yes	Yes	CropLife	700 Baht
	2 Bedroom	4	Yes	Yes	CropLife	800 Baht
Sentra Timur Residence	Studio	2	No	Yes	Trakindo	700 Baht
Tulus Welcome Property	Studio	2	No	Yes	Trakindo	600 Baht
	1 Bedroom	2	No	Yes	Trakindo	700 Baht
	2 Bedroom	4	No	Yes	Trakindo	800 Baht
Apartment Sentra Timur	Studio	2	No	Yes	Trakindo	650 Baht
	1 Bedroom	2	No	Yes	Trakindo	750 Baht
	2 Bedroom	4	No	Yes	Trakindo	900 Baht
RedDoorz Premium	Studio	2	Yes	Yes	Trakindo	600 Baht
Meranti Guest House	Studio 1	2	No	Yes	Trakindo	670 Baht
	Studio 2	2	No	Yes	Trakindo	730 Baht

B.2 Accommodation score

Table 4: Evaluation form and scoring of the top four accommodations

Project Criteria & Detail		Gardenia Boulevard	Signature Park Apartment	Signature Park Grande	Sentra Timur Residence
Safety	Security system	10	10	10	10
	Entry System	10	10	10	5
	Fire sprinkler/ Exit	10	10	10	5
Apartment Facility	Minimart	10	10	10	10
	Laundry	10	10	10	5
	Fitness	10	10	10	5
	Restaurant	10	10	10	10
Apartment Amenities	Kitchen	10	10	10	10
	Water heater in Bathroom	10	10	10	10
	Internet connection	10	1	1	5
	Television	10	10	10	10
	Living room	10	10	10	10
Neighborhood	Shopping mall & Supermarket	10	10	10	1
	Company/ Workplace	10	10	10	10
	Hospital	10	10	10	5
	Police station	10	10	10	5
	Park	10	10	10	5
	Restaurant	10	10	10	10
Transportation	TransJakarta bus stop	10	10	10	10
	Taxi/ Motorcycle Availability	10	10	10	10
Total Points (200):		200	191	191	151

Table 5: Evaluation form and scoring of another four accommodations

Project Criteria & Detail		Tulus Welcome Property	Apartment Sentra Timur	RedDoorz Premium	Meranti Guest House
Safety	Security system	10	10	10	10
	Entry System	5	5	5	5
	Fire sprinkler/ Exit	5	5	5	5
Apartment Facility	Minimart	10	10	10	10
	Laundry	5	5	5	5
	Fitness	5	5	1	5
	Restaurant	10	10	10	10
Apartment Amenities	Kitchen	10	10	1	1
	Water heater in Bathroom	10	10	10	10
	Internet connection	5	5	5	1
	Television	10	10	10	10
	Living room	10	10	1	1
Neighborhood	Shopping mall & Supermarket	1	1	1	1
	Company/ Workplace	10	10	10	10
	Hospital	5	5	5	10
	Police station	5	5	5	1
	Park	5	5	5	1
	Restaurant	10	10	10	10
Transportation	TransJakarta bus stop	10	10	10	1
	Taxi/ Motorcycle Availability	10	10	10	10
Total Points (200):		151	151	129	117

Appendix C: Food options

C.1 Low price restaurant

Table 6: Low price restaurant data and analysis

Low Price Restaurant Menu	Average Meal Cost (RP)	Meal Ordered
Bubur ayam	15,000	Chicken porridge
Seblak Wakwaww Tebet	19,000	Savoury and spicy soup with chicken and fried noodle
Nasi Liwet Sultan	25,000	Fried chicken, bean and tofu with rice
Ojo Lali	25,000	Traditional Beef soup with rice

Ojo Lali	35,000	Friend beef spare ribs
Dapur Rawit	29,000	Seafood Fried rice
Warteg Gaspoll	32,000	Chicken and soy sauce in rice bowl
Sate Perawan Cinta Aqiqah	18,000	Chicken satay with sauce
Bakso Apel	22,000	Spicy / clear soup with noodle
Wendy's, Plaza Kalibata	20,000	Fried chicken + rice + soft drink
Bak Pao	5,000	Bun with meat filling
Roti Bakar Keju	18,000	Roti bread
Kerupuk Putih	2,000	Rice cracker (usually eaten as rice)
Telur Ceplok	5,000	Fried egg

C.2 Medium-High price restaurant

Table 7: Medium-high price restaurant data and analysis

Medium-High price restaurant	Average meal cost	Meal ordered
KKuldak	50,000	Spicy honey fried chicken
Martabak	65,000	Meat-filled Roti Matabak
HokBen	55,650	Japanese bento rice (Chicken teriyaki and fried shrimp)
McDonald	71,000	Beef burger+ potato wedges+ pineapple juice
KFC	53,636	2pcs of Chicken +rice +soft drink
Domino Pizza	65,500	large Sambal Beef pizza
Fish Wow Cheesee	50,000	Fish and spaghetti Mushroom Sauce
Bakmi Berdikari	63,250	Chicken with Mentega sauce
Duren Tiga Indah	52,000	Salmon,Crabstick,Rice,Cheese

Cobek Penyet	68,500	Black pepper beef with curry sauce
AW	58,000	2pcs Fried chicken with rice and rootbeer
Mecah Piting	165,000	Crab, Lobster, oyster and squid in Kajun spice sauce
Sushiya	64,000	6pcs of salmon roll
Sushiya	60,500	Chicken Katsuya

Appendix D: Email Template

Subject: Inquiry about Working with Students from Chulalongkorn University in Thailand

Dear (Name)

We are a group of students from Chulalongkorn University in Thailand. Currently, we are taking the Interactive Science and Social Project (ISSP) course. It is a course that intends to challenge students by relating social needs or concerns to specific issues raised by technological development in which projects are originated with off-campus sponsors, and provide challenges for students to solve real-world problems. This is the first year that our course is expanding our project center in Jakarta city, which we are staying here for four weeks. We are searching for the organization in Jakarta that might be interested in work with Chulalongkorn students on future research projects.

ISSP has a project-based curriculum where groups of students spend seven weeks working with an organization on a project of the organization's choosing. The students will spend seven weeks learning about the specified topic before coming to Jakarta to work full time with the sponsor. The team is self-directed and sponsors generally meet with the team for a couple hours per week. The Chemistry Department of Chulalongkorn University has engaged this model since 2007.

We are interested in your organization's commitment and would love to introduce ourselves and learn about the work you do. We will also give more details about the program and show past student work. If possible, could we interview someone from the organization to discuss this opportunity?

Thank you,

Intuon Intatitan, Mayuree Sapoti, Phat Pichitwarayut, Patrapoom Phanutaiwat

For more information about ISSP, please email us or visit:

<http://chemistry3.chemistry.sc.chula.ac.th/index.php/th/programs-th/bsac-th/bsac-current-student/bsac-issp-2018.html>

https://www.youtube.com/watch?time_continue=1&v=m8ag5zwIRgw

Appendix E: A promoting poster



Figure 7: The promoting ISSP poster

Appendix F: Summary of all possible sponsors

Table 8: Lists of all possible sponsors

Name	Score	Strength	Weakness
Trakindo	48/48	<ul style="list-style-type: none"> - This company has a strong network with other company. If the future project is successful, others will be interested in collaborate with ISSP course. - Suitable workplace, has meeting room, internet access and also restrooms. 	None
Rumah Energi	47/48	<ul style="list-style-type: none"> -Project topic is very related to science. -Have an experience in working with international organizations 	<ul style="list-style-type: none"> -Lack of staff in the office -Have no clear plan on future topics - At intermediate level in English communication
Raindow Reading Garben	42/48	-This organization is an international organization, and is interested in collaboration with students	The project will be based on an eastern island in Indonesia. The Raspberry pi project might be a hard for students. There are only 16 staffs in this organizations.
Dreamdelion	41/48	<ul style="list-style-type: none"> -There are several topics in the future and have completed several projects over many years. -Community development 	The workplace is very dirty and travelling around the workplace is difficult.

eCEOS	37/48	This company is very interested and finds satisfaction in working with students	Only one possible project, the work place is the middle of city, high living cost and traffic jam
hrd pekka	42/48	The project seem to create huge impact to women	BSAC students might not be able to do that project
SCG	42/48	They appreciate to work with chulalongkorn student. However, they suggest us to contact PPP in Thailand to do a project that create international impact such as build plastic road	The project will base on eastern island in Indonesia . The Rasberry pi project might be a hard for students. There are only 16 staffs

F.1: Trakindo

Table 9: Completed sponsor evaluation rubric: Trakindo

Name of organization	Trakindo		
Name, position and contact details	Ronny Nofriana Office of Strategy Management Tel +628119620202 E-mail rnofrian@trakindo.co.id		
Possible project	Factory: Oil analysis, water treatment and waste management School: Basic skills class, Facility management and green environment		
Sustainable partnership	Answer	Score(3/48)	Comment session
How long has this organization founded?	45 year	3	strength
Used to doing project	Yes	3	This company has a strong network with other company. If the future project is successful, others will be interested in collaborating with ISSP course for sure.
Have future project	Yes	3	
Organization was supported	Yes	3	
community impact			
Future project will be related to community	Yes	3	
Exact plan for future project	Yes	3	weakness
Positive impact with company or community	Community	3	
Number of stakeholders receiving positive impact	all	3	
Interest in collaboration with ISSP			
Used to collaborating with students	Yes	3	
Satisfied to work with students	Yes	3	none
Email response	Yes	3	
Can provide the liaison to students	Yes	3	
Suitability			
Can provide workplace	Yes	3	Location
Where is the workplace	TMT, surpong	3	TMT building , Serpong
Safety workplace	Yes	3	
Topic related to science, social and technology	Yes	3	
overall		48	

F.2: Dreamdelion

Table 36: Completed sponsor evaluation rubric: Dreamdelion

Name of organization	Dreamdelion		
Name, position and contact details	Anggita External & Partnership Dreamdelion Tel +62 85695674630. E-mail anggita@dreamdelion.com		
Possible project	Mother empowerment: tailor class , Engaged the society to be able to take care of neighborhood: Garbage management and Educations: basic skill for kids to have a better life in the future		
Sustainable partnership	Answer	Score(3/48)	Comment session
How long has this organization founded?	5 year	1	strength
Used to doing project	Yes	3	There are several topics in the future and used to do several projects for a long time.
Have future project	Yes	3	
Organization was supported	Yes	3	
community impact			
Future project will be related to community	Yes	3	
Exact plan for future project	Yes	3	
Positive impact with company or community	Community	3	
Number of stakeholders receiving positive impact	One community	2	
Interest in collaboration with ISSP			weakness
Used to collaborating with students	Yes	3	The workplace is very dirty and travelling around the workplace is difficult
Satisfied to work with students	Normal	2	
Email response	Yes	3	
Can provide the liaison to students	yes	3	
Suitability	Yes		
Can provide workplace	Yes without internet	2	Location
Where is the workplace	Rusunawa	2	Rusunawa Pinus Elok, East Jakarta
Safety workplace	Normal	2	
Topic related to science, social and technology	Yes	3	
	overall	41	

F.3: eCEOS

Table 63: Completed sponsor evaluation rubric: eCEOs

Name of organization	eCEOS		
Name, position and contact details	Ambara Horasi Country Managing Partner Tel +6285715912006 E-mail ambara.f.horasi@eceeds.com		
Possible project	hiring outsource before/after customer		
Sustainable partnership	Answer	Score(3/48)	Comment session
How long has this organization founded?	6 year	2	strength
Used to doing project	Yes	3	This company seems very interest to work with students
Have future project	Yes	3	
Organization was supported	Yes	3	
community impact			
Future project will be related to community	No	1	
Exact plan for future project	Yes	2	
Positive impact with company or community	No	1	
Number of stakeholders receiving positive impact	company	1	
Interest in collaboration with ISSP			weakness
Used to collaborating with students	No	1	only one possible project, the work place is the mid of city, high living cost and traffic jam
Satisfied to work with students	Yes	3	
Email response	Yes	3	
Can provide the liaison to students	Yes	3	
Suitability			
Can provide workplace	Yes	3	Location
Where is the workplace	Business zone	3	Marquee Office, business area
Safety workplace	Yes	3	
Topic related to science, social and technology	Maybe	2	
	overall	37	

F.4: Rumah Energi

Table 89: Completed sponsor evaluation rubric: Rumah Energi

Name of organization	Rumah Energi		
Name, position and contact details	Lina Moeis Executive Director Tel +62217821086 E-mail l.moeis@rumahenergi.org		
Possible project	Organic Waste Management, Renewable energy (demand/supply management)		
Sustainable partnership	Answer	Score(3/48)	Comment session
How long has this organization founded?	16 years	3	strength
Used to doing project	Yes	3	This organization is very related to applied science knowledge
Have future project	Yes	3	
Organization was supported	Yes	3	
community impact			
Future project will be related to community	Yes	3	
Exact plan for future project	Normal	2	weakness
Positive impact with company or community	Yes	3	
Number of stakeholders receiving positive impact	All	3	
Interest in collaboration with ISSP			
Used to collaborating with students	Yes	3	
Satisfied to work with students	Yes	3	Lack of staff in the office
Email response	Yes	3	
Can provide the liaison to students	Yes	3	
Suitability			
Can provide workplace	Yes	3	Location
Where is the workplace	South Jakarta	3	near Trakindo office(TMT), having office site abroad
Safety workplace	Yes	3	
Topic related to science, social and technology	Yes	3	
overall		47	

F.5: Rainbow Reading Garden

Table 90: Completed sponsor evaluation rubric: Rainbow Reading Garden

Name of organization	Rainbow Reading Garden		
Name, position and contact details	Nila Tanzil Founder and CEO Tel +6281510099013 E-mail nila@tamanbacaanpelangi.com		
Possible project	Raspberry pi, education of kids		
Sustainable partnership	Answer	Score(3/48)	Comment session
How long has this organization founded?	16 years	3	strength
Used to doing project	Yes	3	This organization is international organization, interest to collaborate with students
Having future project	Yes	3	
Organization was supported	Yes	3	
community impact			
Future project will be related to community	yes	3	
Exactly plan for future project	normal	2	weakness
Positive impact with company or community	yes	3	
Number of stakeholder positive impact	all	3	
Interest in collaboration with ISSP			
Used to collaborate with students	yes	3	
Satisfy to work with students	yes	3	The project will be based on eastern island in Indonesia. The Raspberry pi project might be a
Email responses	normal	2	
Can provide the liaison to students	yes	3	
Suitability			
Can provide workplace	yes	3	Location
Where is the workplace	eastern island, Jakarta	2	East Nusa Tenggara based but can provide workplace in Jakarta too
Safety workplace	no	1	
Topic related to science, social and technology	normal	2	
overall		42	

F.6: SCG

Table 91: Completed sponsor evaluation rubric: SCG

Name of organization	PEKKA		
Name, position and contact details	Ms. Fitria Villa Sahara Deputy Director of PEKKA hrd.pekka@gmail.com		
Possible project	Online document collect information of women in rural area		
Sustainable partnership	Answer	Score(3/48)	Comment session
How long has this organization founded?	18 years	3	strength
Used to doing project	Yes	3	The project seem to create huge impact to women.
Have future project	Yes	3	
Organization was supported	Yes	3	
community impact			
Future project will be related to community	Yes	3	
Exact plan for future project	normal	2	
Positive impact with company or community	Yes	3	
Number of stakeholders receiving positive impact	Yes	3	weakness
Interest in collaboration with ISSP			
Used to collaborating with students	Yes	3	
Satisfied to work with students	Yes	3	
Email response	Normal	2	
Can provide the liaison to students	Yes	3	
Suitability			Location
Can provide workplace	Yes	3	
Where is the workplace	East Jakarta	2	
Safety workplace	No	1	
Topic related to science, social and technology	Only teachnology	2	East Nusa Tenggara based but can provide work place in Jakarta too
	overall	42	

F.7: PEKKA

Table 111: Completed sponsor evaluation rubric: Pekka

Name of organization	SCG		
Name, position and contact details	Mr. Viorn Phongsathorn. E-mail: Vikornph@scg.com		
Possible project	realated to waste management		
Sustainable partnership	Answer	Score(3/48)	Comment session
How long has this organization founded?	18 years	3	strength
Used to doing project	Yes	3	They appriciate to work with chulalongkorn student. However, they suggest us to contact PPP in Thailand to do a project that create international impact such as build plastic road
Have future project	Yes	3	
Organization was supported	Yes	3	
community impact			
Future project will be related to community	Yes	3	
Exact plan for future project	Need to disscus	1	
Positive impact with company or community	Yes	3	
Number of stakeholders receiving positive impact	Yes	3	weakness
Interest in collaboration with ISSP			
Used to collaborating with students	Yes	3	
Satisfied to work with students	Yes	3	
Email response	Normal	2	
Can provide the liaison to students	Yes mentor	3	
Suitability			Location
Can provide workplace	Yes	3	
Where is the workplace	South jakarta, business area	2	
Safety workplace	Yes	3	
Topic related to science, social and technology	Not confirm it	1	East Nusa Tenggara based but can provide work place in Jakarta too
	overall	42	