

Two Weeks Struggling in Vietnam

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Introduction

In the Vietnam Internship Program (VIP), a total of seven graduate students, five from construction management and two from structural divisions, stayed in Ho Chi Minh City (HCMC) from December 29, 2019, to January 11, 2020. Each student stayed in both the Chan Phuong Engineering (CPE) and the Authentic Collaboration leads up to Sustainable Construction (ACSC) companies for one week each. This document describes the program objectives, expectations from both the author and the hosts, work experiences, cultural experiences and suggestions resulted from this internship of the author.

Program Objectives

Since I started my graduate program and met some international students coming from nearby Asian countries, I realized that in the past I only have experience and concept about the industry in Taiwan. Therefore, I began to change my vision of the Civil Engineering market and sought for chances to attend any international activity. The two-week program of Vietnam Internship provides a great opportunity. In this program, I expected to understand the mechanism of the Vietnamese civil engineering industry in both construction sites and office work, which are also actually satisfied in the end. It is not enough if I only acquire the knowledge in the Taiwanese market. Thus, knowing how the other country works in this industry, including the project process, method, design criteria, construction scale, cost, cash flow, etc. Since the short period, I would like to learn as much as possible.

Second, Seeing the differences between HCMC and Taiwan is the second item of my objectives. As a student in the construction management division, the cost, schedule, contract type, and scale, etc are the things that I would like to know and explore. This part is the utmost essential since skills and abilities will never improve if there is no comparison. Learning from the advance part of them and improve it afterward.

Third, knowledge of the overall environment of this industry, as well as the average wage of it, is also my expectation. Vietnam is a potential market for engineers in Taiwan as the local market in Taiwan has already too mature. However, the work environment can be so different for us, so experience the job in these local companies may provide me a concept if I am able to survive and get used to it.

Last, experience and enjoy Vietnamese culture and food in this two-week journey, interact with locals and students. Making new friends in foreign countries in order to back up my future. The international relationship is really a shot in the arm when I am searching for jobs and working on projects. In addition, enjoying local cuisines and life, making some travel during the weekends.

Personal and Host's Expectations

For my personal expectation, since I major in construction management, and both CPE and ACSC address a lot of project management works jobs, I wished I could participate in their PM team and assist them with project scheduling by using MS Project. Arranging some work tasks within the software, and learning the process when they are doing PM work. In addition, I have heard that ACSC apply Building Information Modeling in most of their projects. Therefore, though I only acquired the intro-level skill of Revit, I would still like to join their BIM team and improve it by working with the engineers. To see the difference in the application of BIM between Taiwan and HCMC. Helping them building up at least one model if possible. On the other hand, by visiting the construction sites, learn the difficulties to manage a big-scale project from their engineers and listen to the sharing of them along with interactions.

For the host's expectations, I think the main goal of this program for them is to open an opportunity to attract Taiwanese students to join in their industry and companies. To recruit and gather more engineers from Taiwan and to search for potential seeds for training. By introducing their local industry to us, and collaborating with NTU students, they will know the abilities of us and after the internship, they are able to decide if they need us in the future. In addition, by attracting the students and future-engineers in Taiwan, the companies might be able to attach the Chinese market because the language barrier has been

broken which allows them to get more cases and profit in future competition. Last but not least, to pave the way to the longterm cooperation between NTUCE and Vietnamese local companies. Making NTU keep sending students to their country and create a supply chain for the local human resource market. Along with this cooperation, improving their abilities and capacity eventually.

Work Experiences

CPE

CPE, a prestigious consultant firm in Vietnam. The company focuses more on private clients including an international corporation, and mostly their projects are about factory construction. In the first week, we were initially assigned to be in CPE. However, because of my major, construction management, the CPE chairman assigned us to the construction sites. First, we visited a painting material manufacturing factory, Akazo Nobel (Fig.1). They are going to hand over in January 2020. The project was once delayed because of the heavy rain. Khai, a CPE project engineer, also showed us the layout of it in the real place. The second site we visited was the SMC site (Fig.2). It is a Japanese steel manufacturing factory, including phase 1 and 2. There are slightly different between these two. For this project, the deep pit is the most interesting design, it penetrates 18m underground. 3 layers of constructional braces were installed due to the weakness of the soil. Third, we visited the other site which is the Lixil construction material manufacturing factory. This project separated into several parts, the one we visited is for tile manufacturing.

In the site office part, There is a regulation of wall erecting in Vietnam that they need to install a device call water bar (Fig.3), which function to prevent continuous crackers inside the cement. The waterbar connects the floor slab and walls within the grouted cement. The depth and size of it are all regulated in the standard. One of the engineers showed us their Revit model for factory 1 and some construction pictures (Fig.4). Before I thought BIM was only applied in consultant companies, not in sites, but the engineer tells us they need to modify the model according to the construction condition. Thus, it is also necessary for them to have the ability to use Revit. Besides, we also learned how to calculate the quantity of cement which is an important part when they need to compare the amount of material between the plan and reality.



Fig. 1 Akazo Nobel-Material Storage Room



Fig. 2 SMC-Steel



Fig. 3 Waterbar

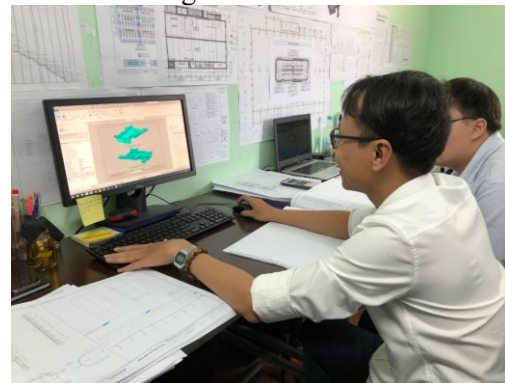


Fig. 4 Revit Modeling

ACSC

ACSC is a company famous for its Design-Build and BIM application. During the second week, ACSC showed us their three projects, M2 global pharmacy, Tho Phat food manufacture, Scitax textile manufacture. In the M2 project, we saw some different constructional techniques that we have never seen in Taiwan, including the Japanese cement installation methods, concrete curing (Fig.5), cracker prevention, etc. This project client is from Taiwan, where great numbers of projects in ACSC are from. Second, the Bread and steam food manufacturing factory, Tho Phat (Fig.6), is merely done. So, in this project we saw the designs that are necessary for food, for example, the MEP layout, wall stuck with heat insulation material, slab level varied by the water flow direction, etc. Finally, in the last project, Scitax, we see a great influence of the earthquake. Because the design of one of the buildings in this project was quite interesting. The structural walls are not consistent, which is never going to happen in Taiwan. In addition, the depth of the beam can be easily changed according to the client, which is also hard to achieve in Taiwan. We were amazed by these designs. And for the indoor apart, ACSC manager showed us their BIM design procedure, which makes the company stand out. This is so necessary that the Taiwanese industry should try to model and learn from it. It really accelerates the progress and benefits of this quality for the whole project.



Fig. 5 M2 Global Pharmacy-cement curing



Fig. 6 Introduction of Tho Phat construction site



Fig. 7 Saitax office building



Fig. 8 BIM division

Overall, the projects we saw during the internship really taught us a lot of things. We learned the concept of design and construction in Vietnam, which enable us to make comparisons with Taiwan. The project cycle is much shorter there, mostly within 2 years. Their Design-Build contract type is progressing and this is also the type they put more efforts in, though it might not be the major type in Vietnam, what we saw in ACSC is they have a really mature process of this type of contract. This really benefits the reduction of time a lot. For seismic design, some of the projects in Vietnam also apply earthquake. BIM application is another greatness in Vietnam, which is recently promoted even by the government and local companies. Though the structure of the industry in Taiwan is totally different, the application of BIM should be put into efforts. Besides, as a student, I need to broaden my international sight to receive information from the world, not just focus on the local industry. These are the things we should consider for our future, as well as the academic field's future in Taiwan.



Fig. 9 Final Presentation

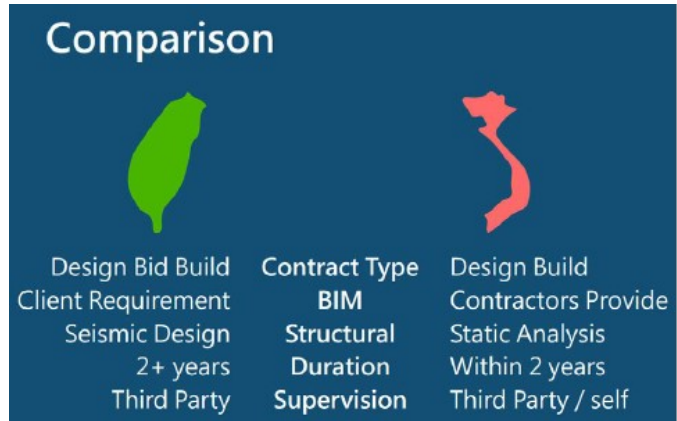


Fig. 10 Comparison Between TW and HCMC

Cultural Experiences

FOOD

In Vietnam, fish sauce is the utmost essential element for their daily food culture. Almost every type of dish can be served with fish sauce. In the first few days, the sauce tasted so delicious, but after a week later, the strong flavor began to overwhelm your appetite and made me uncomfortable. Besides, coffee is one of the daily routines in HCMC. Every Vietnamese starts his/her day with a cup of ice coffee. However, the taste of their coffee is so different from Taiwan. Unlike we drink mild and non-sugar coffee in Taiwan, Vietnamese prefer their coffee served with a lot of sugar which makes the taste sweet and strong. Thus, to wash away the strong taste, each cup of coffee served with another cup of green tea (Fig.11). For the dishes, we have tried a lot of local cuisines, including pho (Fig.12), banmi (Fig.13), BBQ, spring rolls, Vietnamese stinky tofu (Fig.14), instant noodle, hotpot, etc. Among all the dishes, I preferred pho the most since it was the mildest dish in all of them and also because I am really a beef noodle guy. Banmi was another dish I like so much as well, which was a french bread sandwich served with many kinds of hams, duck liver, vegetables. It was really suitable for any meal during the whole day. Snacks like smoothie (Fig.16), juice, durian milkshake are also so delicious and fresh in HCMC. During the two weeks in HCMC, I always had at least a cup of mango smoothie every day. You can never resist the charm of fresh fruit!



Fig. 11 coffee with tea



Fig. 12 Pho



Fig. 13 Banmi



Fig. 14 Stinky Tofu



Fig. 15 Street food



Fig. 16 Fresh Fruit Smoothie

TRAVEL

During the weekend and the holidays in Vietnam, I made some travels to the Cu Chi tunnels in the north broader of HCMC, Mekong Delta River and some historical sites inside the city, including Notre-Dame Cathedral Basilica Saigon, National Palace Museum, War Remnant Museum, Bưu điện Trung tâm Sài Gòn (Post Office), Chợ Bến Thành market, etc.



Fig. 17 Cu Chi tunnel



Fig. 18 Mekong Delta Trip



Fig. 19 War Remnant Museum



Fig. 20 Notre-Dame
Cathedral Basilica Saigon



Fig. 21 Bưu điện trung
tâm Sài Gòn



Fig. 22 National Palace Museum

Inside HCMC, there are also a lot of party places like the Foreign Street, Skybar, Saigon River ferry, message stores. The life in Saigon was so colorful and exciting. Our Vietnamese friend, Hai, also brought us to his home and nearby area to have a comfortable walk.



Fig. 23 Foreign Street



Fig. 24 Saigon River Ferry



Fig. 25 Skybar



Fig. 26 miumiu sauna place

During this two-week exploration of HCMC, I felt like this is a city with great cultural tolerance, we can meet people coming from different countries. The city itself is also full of cultural treasure and value, no matter the historical background or the integration between a foreign country and the locals. Though there are still some bad sides of HCMC, I can easily feel the local passionate atmosphere within the society and the feeling that no matter where you from, everyone is welcomed to this city.

Suggestions

Before Vietnam:

1. Schedule and arrangement can be more detail designed before the travel.
2. The requirement for students before leaving should be well-noted, ex. visa, flight, hotel, payment, insurance, gift, report requirement, etc.
3. Taking BIM courses and summer interns in advances are recommended
4. Having the basic insight of the Taiwanese industry
5. Better if more there are more diversity of students with different majors
6. Provide more chances for Taiwanese students, and encourage them to apply. If the budget is not enough, perhaps regulate the number of foreign students.
7. English qualification requirements or interviews should be held.

In Vietnam:

1. Companies should provide interns the basic plan for each day, not asking interns what they want to see. (Maybe discuss with NTU beforehand)
2. The companies have to have someone who can speak basic English. Or each group should have at least one Vietnamese student.
3. Extend the internship program duration, at least 1 month.
4. For site visiting, better if companies provide constructional shoes.

After Vietnam:

1. Each student should submit a feedback report
2. If necessary, student can volunteer to share the experience in the next year
3. A review meeting can be arranged if necessary.

In the end, I want to thank our department for providing this great opportunity! It was a precious experience for me since working in a foreign country is my plan for the future. From this internship program, I felt I have obtained an advancement of the ability to adapt to the new and unfamiliar environment in a short time. The final presentation has strengthened my courage to present and how to reply properly to foreign seniors. Furthermore, this program also allowed me to figure out what else do I need for preparing the future, such as BIM ability, communication ability, presentation improvement, etc. Therefore, from now on, by know the things I still require, I should keep on going for a better future!



Fig. 27 group photo in CPE



Fig. 28 group photo in ACSC