



CANADA-JAPAN CO-OP PROGRAM EXPERIENTIAL REPORT

for the work term undertaken at

DAI NIPPON PRINTING CO., LTD

大日本印刷株式会社（柏研究開発センター）

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## **Table of Contents**

Introduction and History of Dai Nippon Printing.....	2
Work Term Structure.....	3
Skill Development and Main Research Topics.....	4
Relationships with Coworkers and Superiors.....	7
Life in Japan – Day to Day.....	8
Life in Japan – Cultural Activities.....	10
List of Cultural Activities/Photos.....	12
To Future CJCP Students.....	18
Impressions of Japan .....	19
Conclusion.....	22

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## Introduction and History of Dai Nippon Printing

As anyone with some knowledge of the names of Japanese companies might know, the words “Dai Nippon” (*lit.* Big Japan) usually signal that the company is an especially old one, and Dai Nippon Printing (DNP) is no exception. Founded in 1876 under the name Shueisha in Ginza, Tokyo as a letterpress printing company, it rapidly emerged as one of the largest printing companies in Japan during the time, printing Japanese books as well as some of the first Japanese translations of foreign books to be produced in the country. In the early 1900s significant competitors began to emerge and following the destruction of the head office in the Great Kanto Earthquake of 1923, Shueisha merged with another company, Nisshin Printing Co., Ltd in 1935 to become Dai Nippon Printing.

After the end of World War II, DNP first listed its shares on the Tokyo Stock Exchange in 1949 and thus began a period of Research and Development growth for the company. Demands were different after the end of World War II, and DNP had to expand its interests to remain relevant in the new business landscape. Production began on new paper containers, and printing technologies were expanded to new substrates including vinyl, cellophane, and cloth. DNP developed new techniques not only in the printing sphere, but in other research areas as well – for example, DNP was the first Japanese company to produce shadowmasks for colour televisions.

In the economic boom years of the 60s and 70s, research interests at DNP expanded greatly into fields such as food packaging and aseptic filling systems, direct printing on metal surfaces, and magnetic-stripe security cards. This period of innovation continued through the 80s as DNP opened sales branches worldwide as well as factories in neighbouring Asian countries. During this time, production began on technology such as PET bottles along with aseptic filling systems for them, thermal transfer ink technologies, and smart cards. This trend of expansion into fields not traditionally considered part of the sphere of “printing” technologies continues today, where DNP applies its printing expertise in unique ways to fields such as semiconductor and circuit printing, regenerative medicine and life sciences, insulated packaging for lithium-ion batteries, and much more with the goal of creating “Tomorrow’s Basic” – products that will become an essential part of daily life for many people in the future.

## **Work Term Structure**

The structure of this work term was somewhat unique in that I did not work with one single department for the entire seven-month period. Instead, I began the work term by rotating through various departments at the Kashiwa Research and Development Center as well as several other locations in week-long or shorter segments. This period exposed me to a very diverse set of research projects which I otherwise would never have a chance to experience, as well as gave me the chance to get to know as many of my coworkers as possible. From the beginning of the work term in May 2019 until the beginning of August 2019, I worked with 15 different departments, from which I chose four departments to return to for month-long rotations beginning after the August summer vacation.

At the Kashiwa Research and Development Center, departments are divided into major umbrellas based on the main type of research being performed – the Patterning Products team researched techniques to apply DNP's unique printing and patterning technologies to create new products, and the Converting Products team worked on applying DNP technology to add new value to existing products on the market. Within each of these large umbrellas, individual teams worked on more specific projects, and the people within each small team were usually divided up into several small groups themselves. Each of my rotation periods involved working closely with these small teams on individual projects, and I was impressed by the diversity of research interests not only within the center itself but within each of the smaller teams as well.

Given the unique structure of this work term, it is difficult to define my specific role in the workplace as it varied greatly between each department depending on factors such as my prior experience with the topic. In some cases where I had little experience with the research being done, I took on more of an intern-like role and focused more on learning new concepts, but in cases where I had previous experience with the research I took on more of a normal, everyday working role, especially during the month-long rotation periods at the end of the work term. This diversity in experiences between each team kept the work term exciting from beginning to end, both in terms of the variety of research performed but also the many people I had the pleasure of spending time with in each team.

## **Skill Development and Main Research Topics**

Once again, the large diversity of research experience accrued throughout this term makes it difficult to pinpoint extremely specific points of learning, but there were several general themes and methods employed across various departments. The most major of these was soft and hard lithography technology, applied mainly for the patterning of metal circuits onto both flexible and rigid substrates. These techniques involved the combination of photolithography and chemical etching to produce complex, multi-layer circuits on substrates such as glass, silicon, or flexible polymeric materials. Printing methods were employed in almost every facet of research such as screen printing of adhesive patterns for transfer of metal circuit between substrates or printing cell-adhesive material on stem cell culture plates to encourage specific cell growth patterns. Another general skill developed during this work term was the ability to work properly in a dust-free clean room environment, necessary for avoiding contamination during printing processes. There are a number of clean rooms at the Research and Development Center which offered an excellent opportunity to become accustomed to work in a location with strictly-controlled environmental conditions. Overall, the work term provided a great variety of different learning experiences in terms of research techniques and environments.

My first month-long rotation was carried out with a team developing flexible electronic circuits for use in skin-mountable sensor and display modules. These types of devices could be useful for applications such as portable, non-obtrusive heartrate or blood oxygen sensors, wearable media devices for entertainment and functionality similar to today's smart watches, low-profile sensors for monitoring muscle activity during physical activity or rehabilitative exercises and so on. Research with this team involved extensive use of the photolithography and screen-printing techniques mentioned above, all performed in a clean room. During this rotation, I worked in the clean room most of each day for four weeks and developed a great appreciation for the measures required to ensure printing accuracy and avoid dust contamination. I also gained experience in photolithography techniques, as well as various laser microscopes used for checking accuracy of the printed circuits I had helped fabricate.

On the other hand, the second month-long (six week) rotation took me out of the clean room and into the cell culture laboratory where I assisted with the growth and upkeep of miniature intestinal organoids. Grown for use in medical testing applications to reduce the prevalence of animal and human trials, working with these intestinal organoids afforded me the opportunity to learn techniques

for working with human induced pluripotent stem cells, quite a change from my prior experience with bacterial culture. The upkeep process involved regular changes of culture media, removal of fully matured/nonviable samples, and monitoring growth by taking pictures with a microscope. Being a microbiological laboratory, work was mostly carried out in biosafety cabinets to ensure a sterile environment which gave me the opportunity to improve on my sterile technique. Additionally, I harnessed previous experience working in a microbiological laboratory setting at the University of Victoria to help design and carry out three original experiments designed to improve maturation of the intestinal organoids into more human-like samples. While the results were not as successful as hoped, I enjoyed the opportunity to help design and carry out experiments in a corporate research setting which has a very different research environment to that of a university.

For the third month-long rotation, I again worked for most of the time in a clean room helping to fabricate and test circuits for use in modern 5G applications. This period of research was especially interesting from a learning perspective as it was something that I had never had any previous experience with at university or otherwise. Development of 5G-compatible devices involves the precise fabrication of circuits that run with low losses at high frequencies and is especially difficult in the case of compact integrated circuits. In these types of circuits, multiple layers are stacked in a way that ensures they are insulated from each other but are still connected through selected points called ‘vias’ through the insulating dielectric layers in between. Realizing this type of device without incurring large performance losses is a difficult task that must be conquered for the successful integration of 5G-compatible devices into our daily lives. During this rotation, I employed photolithography, electroplating, lamination of dielectric layers, and metal sputtering techniques to fabricate circuits, and measured the accuracy and dimensions of various circuit patterns with microscopy techniques. I also had the chance to measure the high frequency characteristics of the circuits with a frequency response analyzer. Finally, I gained experience in manipulating large quantities of data by summarizing and comparing all the high frequency measurements. For this rotation more than the others, I spent a great deal of time reading papers and developing background knowledge on the subject as well as it was completely new to me and developed an interest in an area of research that I otherwise would likely have not been exposed to at all.

The final one-month rotation was the one that I was most familiar with before coming to DNP, as it involved the synthesis and manipulation of nanoparticles. My Honours research at UVic also involves nanoparticle research, but the type of nanoparticle was entirely different, enabling me to expand my knowledge in this field even further. DNP’s nanoparticle research is mostly based on

developing hard, anti-reflective coatings, which is an application I had never heard of before and therefore it was of great interest. Being at the end of the work term and end of the year, there were many events and things to attend to during this time, so I did not spend as much time proportionally in the laboratory as in previous sections. However, I spent about a week and a half getting used to the procedures used in the lab through assisting my coworkers with their experiments, and then set out to try and design my own experiment by altering the shapes of the nanoparticles used and evaluating the effect of this on the particles' anti-reflective properties.

As important as research and technical skills are, the interpersonal and intercultural skills gained during this work term are just as important. Living and working in a foreign country is not easy, and although my coworkers did their best to make it as comfortable for me as possible, there inevitably were still challenges to face. Perhaps most obvious is the language barrier. The structure of my work term meant that the English ability of my coworkers varied wildly amongst the different teams I worked with; in a few cases there were fluent English speakers on the team, most of the time people had some English ability but not much, and in rare cases had almost no English ability at all. My desire to communicate with all my coworkers equally to the best of my ability became one of my biggest motivators, especially during the beginning of the work term – I forced myself to practice Japanese both outside of and at work to reduce the language barrier as much as possible. By the end of the work term, most people spoke with me almost exclusively in Japanese including people with high proficiency in English, a testament to the communication skills I was able to develop.

Of course, interpersonal and intercultural skills encompass much more than just language skills – workplace culture and personal interactions in Japan are vastly different than Canada and took some time to adjust to. The concept of understanding where you stand in the hierarchy of a group of people and adjusting your speech style and mannerisms to match was very important. There was also a palpable sense of community at the workplace, especially within each of the smaller teams. Everyone greets each other when they arrive for the day and tells everyone “thank you for the hard work” when they head home for the day. Being in a very decidedly Japanese environment every day for the past seven months has expanded my way of thinking and allowed me to consider life from the point of view of different backgrounds to understand their motivations. This growth has not come without some rough patches such as miscommunication with Japanese friends or misunderstanding of instructions at work, but all these issues are part of the learning process. Due to participating in the Canada-Japan Co-op Program, I have developed a desire to work in a position involving international research collaboration in the future and am confident that the skills gained during this work term will

go a long way towards furthering that goal both in terms of the laboratory skills and ability to connect and communicate across cultures.

## **Relationships with Coworkers and Superiors**

Above anything else, the warm welcome and constant support that I received from DNP and my coworkers was the main reason I felt so comfortable in Japan so quickly. As DNP has been receiving interns every year for quite some time now, the employees are used to having an intern present even though the company is undoubtedly very traditionally Japanese. Additionally, the fact that DNP only ever takes one intern at a time means that many DNP employees can get to know each intern on a more personal level. For me as the intern, this meant developing friendships with some coworkers that extended outside of work events and the like. For example, I went with coworkers to Tokyo Disney Sea and a local soccer match on a weekend, volunteered with the boy scout troupe of one of my coworker's children, played mah-jong at a local parlour after work, and went bowling to name a few. It has been an excellent experience for me to develop these connections with people at work, and the fact that many people quite a bit older than me allowed for some very interesting conversations that bridged not just cultural but generational gaps as well. At work, coworkers always offered to eat lunch together in the cafeteria, and regularly greeted me in the hallways to ask how I was doing or what kind of travels or activities I had been up to recently. As for my relationships with superiors, before coming to Japan I was slightly nervous about the task of interacting with superiors, given the intricate politeness levels of the Japanese language which I still do not fully understand. However, the interactions ended up being much more casual than expected in most cases. During the one-week rotation period at the start of my work term, I had a party after work almost every week sponsored by the boss of each section I worked with, and more than a few of them explicitly told me it was okay to use casual Japanese when speaking with them. Of course, I realize that these privileges would not be afforded to regular employees, but I appreciated the warm welcome all the same and never had any personal issues with any of my coworkers or superiors.

## Life in Japan – Day to Day

While it took a few weeks to settle in, day to day life in Japan quickly became very comfortable. The day that I arrived in Japan, the person who had conducted my job interview, Mr. Tsuyoshi Hotta, came to pick me up at Narita Airport and help me bring my bags to Kashiwa, Chiba – my home for the next seven months. We were greeted at Kashiwa station by three other coworkers who led me to my apartment, a small monthly rental located a short walk from Kashiwa station, where they helped me to set up my bedding and internet access. After this, we headed to a nearby izakaya for a delicious welcome dinner of sashimi and grilled fish dishes. I was quite overwhelmed and nervous at first when arriving at Narita Airport, but having my bosses and coworkers there to help me adjust as soon as I arrived was an amazing welcome and great start to the work term.

For the first two weeks or so, I lived what the Japanese call the “convenience store life”, buying every meal and most supplies from the nearby convenience store while taking the time to get my documents in order, explore the city and get my bearings. Kashiwa is not so far from Tokyo, but the atmosphere is much more local and English support was few and far between, so I relied on my coworkers to help me set up my phone plan, get my residence card at the city hall, and any other of these initial issues that I may have experienced. At first things were slightly overwhelming, but thanks to the friendly attitudes of not just my coworkers but everyone around me, from shop clerks helping me to decipher payments in stores, and people helping with directions if I was wandering around looking lost.

By the end of the second week, I had bought a small set of essential kitchen supplies at the local Don Quixote and stocked up my fridge with basic ingredients. From then on, a more daily routine started to set in. I took a company bus to and from work every day, which left from outside Kashiwa station at around 8:10 – 8:30 am to travel to the Research and Development Center near Kashiwanoha-Campus station, an area housing satellite campuses of both Chiba and Tokyo University. Every work day began at 9:00 am and ended at 6:00 pm (except for the occasional after-work gathering in the cafeteria), and I took the 6:15 pm bus home every day. My apartment was incredibly convenient for getting to and from work as it was only five minutes on foot from the bus stop and the same distance from Kashiwa station. I decided to save my money as much as possible for the weekends when I would go travelling or go out with friends, so I began to cook almost every day at home if I did not have plans to do anything after work. As mentioned earlier, during the beginning of the work term I had a work party almost every week, but other than those days I would cook at home and meet

other CJCP students on the weekend to travel, explore Tokyo, or go to restaurants. This routine of cooking simple, cheap food at home as much as possible continued throughout the work term, but as I began to make more Japanese friends I spent more nights after work meeting them for dinner, movies, or other activities.

During the first few months of the work term, I studied Japanese every day for an hour or so after I returned home and made an effort to use that night's new grammar or vocabulary as much as possible at work the next day. Once my Japanese level started to improve, however, I stopped this practice and began studying mostly through conversation with colleagues. I found that learning grammar through immersion and conversation, while slow at times, enabled me to develop a more natural speech style. Conversing a lot at work also improved my pronunciation greatly as well. At first, I often found myself mentally exhausted after work due to forcing myself to use Japanese as much as possible, but my efforts paid off. It was very rewarding to hear from coworkers that my language skills had improved or go to a store where previously I had difficulty and navigate/communicate with ease. By making Japanese practice a part of my daily life, I believe that I was able to experience local culture more than would have been possible otherwise.

The work day varied significantly from day to day depending on experiments, but in general I would arrive at work around 8:45 – 8:50 am, change into my work uniform, and go to check emails. Every morning around 8:55 am a song played over the building speakers and everyone stood up to stretch and prepare for the day ahead. Starting from 9:00 am, I would generally begin the first task of the day with my supervisor, which was usually an experiment but could be research or summarizing/analyzing the previous day's data. Lunch break was officially held from 12:00 – 1:00 pm, but the staff cafeteria was open from 11:30 am – 1:30 pm so we often chose to go earlier or later to avoid the crowds. At the cafeteria, there was a choice of about six different options which rotated every day, including curry, udon/soba, occasionally ramen, and set meals, all of which were priced around 500 yen. I enjoyed the lunch setup as it allowed me to have a variety of cheap options to choose from depending on what I wanted to eat that day. After lunch break, I would usually perform experiments until about 4:30 – 5:00 pm, at which time I would return to the office and do any paperwork that needed to be done or summarize my work for the day until 6:00 pm. Daily life was very simple and convenient, and with no long commutes to deal with I had time to do what I wanted after work each day. I could head back home to rest and cook dinner, explore my city, or take the train from the station near my workplace into Tokyo to meet a friend for the evening. The convenient location of my workplace and apartment made for a very enjoyable lifestyle.

## Life in Japan – Cultural Activities

As my interest in Japanese culture was one of the main reasons I applied for the Canada-Japan Co-op Program in the first place, I tried to experience as many cultural activities as possible during the work term. However, before coming to Japan I had decided that I also wanted to experience activities that a normal tourist would not be able to, so after I had adjusted to the Japanese lifestyle and my language skills had improved I did my best to search out more local cultural activities. Some of my favourites were going to summer festivals and fireworks, exploring shrines both small and large, trying out various different public baths and onsen resorts, going to local community events, taking part in tea ceremony classes, seeking out the famous foods of each region I travelled to, and more. Additionally, in order to enjoy these things to the fullest, I did my best to make as many Japanese friends as possible both at work and outside it.

Making Japanese friends was one of my main goals before embarking on this work term. As I am generally a bit reserved when it comes to new people, I found it difficult to make friends with Japanese people outside of work at first. However, I found a way around this by using a language exchange application called HelloTalk, with which I was able to connect with people living in the Tokyo area. Afterwards, I began to meet friends through mutual friends I already had, or coworkers as well. Living relatively far apart from most of the other Tokyo-area CJCP interns, I decided to instead devote my efforts into making more local Japanese friends as opposed to travelling all the way to the west of Tokyo every time I wanted to meet someone. I also managed to visit some Japanese friends that I had met in Canada in their cities of Fukuoka and Kyoto. My relationships with the Japanese people I met during this work term are the thing that I will miss the most upon returning to Canada.

Japanese festivals are always incredibly interesting and range from lively and loud to sombre and peaceful depending on the occasion. On the day after I arrived in Japan, I met CJCP students in Asakusa to see the last day of Sanja matsuri and so was immersed in festival culture from the start. I travelled to Fukuoka to see the famous Hakata Gion matsuri in July with some other CJCP students, and once summer arrived I went to three different fireworks festivals three weekends in a row – Adachi, Sumidagawa, and Edogawa. During the Obon festival time I watched the Kashiwa Bon Odori dance at Kashiwa Matsuri, and when my family came to Japan we went to a Bon Odori group dance event in Hiroshima as well. Overall, I greatly enjoyed the lively festival culture of Japan and had a great time every time I went. Also related to festival culture are Japanese shrines – I saw many beautiful shrines, mausoleums, and temple throughout my work term. Some of my favourites were Nanzoin in

Fukuoka, Ginkaku-ji and Fushimi-Inari Taisha in Kyoto, Itsukushima Jinja in Miyajima, and Zuihoden in Sendai, but I enjoyed all of the ones I went to for each of their unique atmospheres.

Over the course of this work term, I fell in love with the onsen culture of Japan. The first exposure to this culture was a trip to Oedo Onsen Monogatari in Odaiba, Tokyo with some other CJCP interns. It was a good introduction to the bathing etiquette of onsens or public baths but lacked the natural ambience that I had been curious about before coming to Japan. The second time was during a solo trip to Kanazawa in which I went way out into the countryside to a public bath, where apparently only very old men ever go to. I ended up having a long conversation with them in the bath after one of them started a conversation by telling me he had been to Vancouver 40 years prior. During a trip to Sapporo, I decided to go visit the famous Noboribetsu onsen, and spent about 3 hours trying out all the different varieties of baths. My favourite onsen of them all was Kusatsu onsen in Gunma prefecture, where I stayed at a ryokan resort and relaxed all day in the waters. The onsen culture in Japan, if you can go to a more nature-rich area with good outdoor baths, is one of the most relaxing experiences to be had in Japan and a great break from the busy life of Japanese cities.

Perhaps the most significant cultural activity I took part in throughout the work term was the tea ceremony classes taught by one of my coworkers, which I attended four times. During those sessions I experienced the most peaceful and meaningful expressions of Japanese culture through both drinking the tea and preparing it, made some good friends, and had many interesting, insightful conversations as well. While preparing my last cup in the last class of my work term, I felt the culmination of my time in Japan, from the friends I had made, struggles I had, and things I had experienced all be incorporated symbolically into that last cup. It was a powerful experience and indicative of my feelings about the time I spent in the country. There are of course many more cultural activities that I participated in, but to talk about them all in detail would require many more pages. Thus, I've summarized all of them in list format below as a short overview, but it is important to note that the main cultural activity that I took part in and enjoyed the most was simply the act of trying my best to experience immersion in a completely different culture and all the lessons I learned along the way.

## List of Cultural Activities/Photos

### ● Company Activities

- Year-end Party
- Drinking Parties after work
- Southeast Asian international student meeting and social **(a)**
- Canada Day 2019 Presentation and party
- DNP corporate tour of Gotanda and Ichigaya branches
- Dinner at Mr. Tsuyoshi Hotta's house **(b)**
- Year-end party at Mitsui Garden Hotel Kashiwa



● **Travel Destinations**

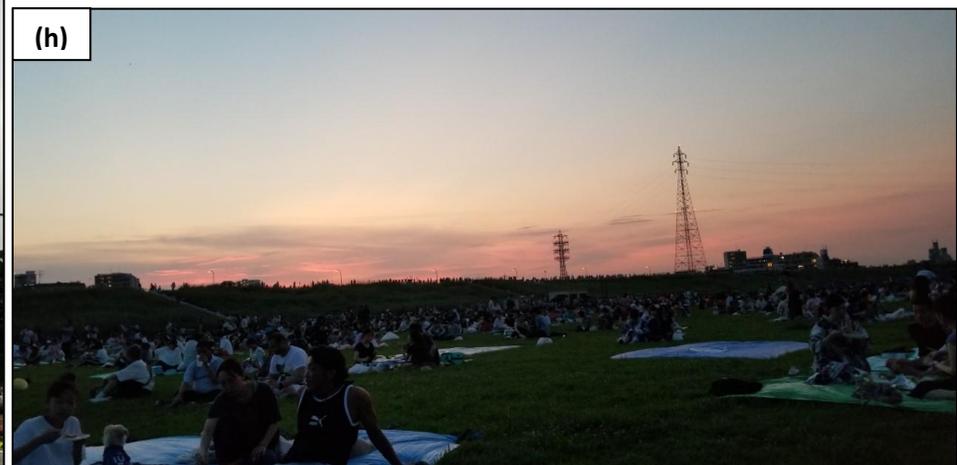
- Kyoto (2 times) **(c)**
- Sendai/Matsushima, Miyagi
- Kanazawa, Ishikawa
- Sapporo/Otaru, Hokkaido **(d)**
- Osaka
- Hiroshima/Miyajima
- Mount Kouya (Wakayama)
- Nara
- Kawagoe, Saitama
- Yokohama, Kanagawa
- Kamakura/Enoshima, Kanagawa
- Fukuoka
- Kusatsu Onsen, Gunma
- Fuji Five Lakes **(e)**
- Kifune, Kyoto
- All around the Tokyo area!
- Atami, Shizuoka
- Singapore
- Seoul, Korea **(f)**





● **Events and Festivals**

- Nagareyama City Festival
- Asakusa Sanja Matsuri
- Kashiwa Matsuri
- Hakata Gion Matsuri Fukuoka **(g)**
- Kawagoe Summer Festival
- Adachi Fireworks Festival
- Sumidagawa Fireworks Festival
- Edogawa Fireworks Festival **(h)**
- Hokkaido Food Festival at Yoyogi Park
- Ueno Summer Festival
- Hiroshima Bon Odori Festival
- Shibuya Blue Cave illuminations **(i)**
- Tokyo Motor Show
- Nakano Gyoza Festival





● Miscellaneous Cultural Activities

- Onsen
  - ◇ Onsen in Kanazawa
  - ◇ Oedo Onsen Monogatari Odaiba
  - ◇ SpaJapo Super Public Bath Saitama
  - ◇ Noboribetsu Onsen (j)
  - ◇ Kusatsu Onsen (k)
  - ◇ Funaoka Onsen Kyoto
  - ◇ Hatago Sakuraya Onsen Ryokan Yamanakako
  - ◇ Nikkotei Onsen Atami



- Autumn Leaf Viewing in Kyoto **(l)**
- Tea Ceremony Lessons **(m)**
- Volunteering with Nagareyama Boy Scouts for typhoon damage fundraising
- Testing famous regional and seasonal foods
- Hedgehog Café **(n)**
- Traditional Japanese sweet making class at Kanshundo in Kyoto **(o)**
- Nightclubs in Shibuya and Roppongi, Tokyo
- Halloween party in Shibuya, Tokyo
- Karaoke with friends and coworkers
- Kashiwa Reysol vs. Tokyo Verdy J2 Soccer match **(p)**

- Tokyo Disney Sea with coworkers
- Mahjong parlour after work
- Praying at temples and taking omikuji
- Used clothes shopping in Shimokitazawa, Tokyo
- Nuclear bomb museum in Hiroshima
- TeamLab Borderless in Odaiba, Tokyo **(q)**
- Tokyo Modern Art Museum
- Bowling in Kashiwa
- Game centers, billiards and darts in Shibuya and Akihabara
- Matsushima Bay boat tour
- Yokohama Ramen Museum





## **To Future CJCP Students**

It is difficult to give a blanket recommendation of how to make the best of one's time in Japan during a CJCP internship, as everyone has their own unique way of enjoying what the country has to offer. The activities that everyone enjoys and their drives to participate in this program are different, so try not to compare your experience to others and instead focus on what you want out of this experience. Be aware of the excellent opportunity you have and make the best of it in the way you want. One of the most important pieces of advice that I can give to everyone is be courageous about putting yourself into new situations – as much as possible, try not to let worries hold you back because there are many experiences you can only have in Japan and holding yourself back would be a waste of the opportunity.

However, regardless of your future plans to use Japanese after your internship ends, I believe that making a conscious effort to improve your Japanese skills during your time in the country is very important. I encountered a common attitude among many of the CJCP students during my time in Japan: “I won't use Japanese after I leave so there's no point to studying”. While perhaps there is some truth to this point of view for many people, improving your Japanese skill a little can make a large difference in your quality of life and experience of the country. First and foremost, speaking some Japanese will break down the barriers of shyness that Japanese people often have towards speaking with foreigners, especially in English. Chances are, their English is decent but their fear of making mistakes is holding them back from trying. Increasing your Japanese level is a sure way to more easily make friends with locals during your work term, as often people will often be too shy to start a conversation with you even though they may want to. Some of the most interesting conversations I have had were the ones where I spoke with people in a mix of both languages, using whichever one allowed us to express our thoughts the best in that moment. Secondly, daily life becomes so much easier the more Japanese you know. You will start to be able to recognize and read signs and especially restaurant menus, the announcements you hear on trains and buses will become understandable, you will no longer have to worry about not understanding messages about train delays or accidents, and interactions with store staff become much simpler. At first it will be overwhelming, but the faster you start to understand, the faster you will feel comfortable with your life in Japan. Lastly, every time you learn something new you will feel a great sense of accomplishment. Japanese is a difficult language especially when it comes to reading and writing, so conquering obstacles and learning about new aspects of the language is incredibly rewarding. The first time you are able to read a sign, understand the questions of a shop attendant, or have a regular conversation entirely in Japanese with someone

will all leave you with a strong feeling of accomplishment and make you want to study and learn more. All it takes is the first couple times of learning something new – the improvement in your comfort and quality of life in Japan is easily noticeable and when you do so you will not want to stop learning. Your efforts in language learning need not be intensive – a flashcard program on your phone, going over a textbook on your lunchbreak, and working towards new goals bit by bit is all it takes. I cannot emphasize enough the difference that learning Japanese makes – by the end of the work term you may find yourself regularly going days without using English, conversing with friends that do not speak English with relative ease, and just simply enjoying a more comfortable, integrated life that is impossible to experience for the average tourist.

As far as work goes, the advice depends on the nature of work. For me, my work was research based so the schedule was not rigid every day, different from non-research positions. My advice for a research position is that when you are knowledgeable about a subject, create your own research ideas and thoughts for next steps to take, be proactive, and communicate those thoughts to your supervisors. Of course, be careful not to overstep your authority when it comes to proposing new ideas but work hard and make it known that you have ideas and are eager to share if possible. If you are not as familiar with the research, use time wisely to learn new skills. Spend your free time looking up background information about the subject and reading scientific papers and ask plenty of questions to your supervisor about the topic. Finally, take every task you are assigned seriously, and even if it is a somewhat mundane task, use the time to think about new ideas while performing your work. If you have no work topics to consider at the moment, think about how you can improve your intercultural communication skills. Consider the attitudes of your coworkers and how they carry themselves at work and try to emulate them as much as possible when you get the chance. Simply put, do not waste time at work, be proactive, propose new ideas, communicate well with your coworkers, and you will succeed.

## **My Impressions of Japan**

Living in a foreign country for a longer period of time is a very different experience to being a tourist in one. Both are great experiences and have their own merits, but there are certain things that can only be experienced over a longer period of immersion and integration into a culture. You learn both positive and negative things about the country through the experience, and have a much deeper look into how everyday, normal people live.

In the case of Japan, the first thing that struck me was the simultaneous orderliness mixed with the chaos of having so many people occupying such a small space (if considering the Greater Tokyo Area). Following that was the staggering variety of great quality food wherever you go, at reasonable prices if you look in the right places. To sum up daily life in Japan briefly, it is very convenient. Of course, this does not apply to the far countryside areas of Japan, but the 24 hour convenience stores, long opening hours for restaurants and bars, and megastores like Don Quixote that carry anything you could need make it quite an easy place to live in terms of daily necessities. The neighbourhoods range from chaotic and exciting to peaceful, both of which make for excellent places to take a walk and explore if you have nothing to do. There are traditional temples and low houses juxtaposed against tall apartment complexes in a rare look at a generational and cultural shift in progress. Being in a Japanese city or town is exciting and interesting, and there are different things to discover wherever you go – the culture differs greatly from place to place and especially from city to countryside.

Work culture is a place where differences are easy to notice. The way people interact with each other is deeply rooted in seniority and age-based hierarchy. This kind of experience may not be something you notice unless you are placed at a more traditional company, and as a foreigner it is very likely you will not be expected to be perfect when it comes to recognizing hierarchy and interacting in accordance to it. However, as your Japanese ability improves and you become more used to the country, you will start to notice the subtle and complicated differences in the way people treat each other at work. In my case, I did not fully start to realize this until a few months into the work term, wherein the politeness differences in everyday speech started to become very apparent. I also started take notice of the long hours that everyone worked, and the perpetually tired faces of people on the trains before and after working hours. It is also true that there is an obvious gender gap in the workplace in Japan, which most women are acutely aware of but unfortunately feel like they cannot say much about the problem or change it. Working in Japan in a typical “salaryman” position is not easy, and it is important to be mindful of the privilege we as foreign interns have working in Japan in that generally we do not go through that experience. I also enjoyed the many drinking parties that I attended with coworkers but can appreciate how they could become tiresome for regular employees as well. All in all, it is very important to treat everyone with understanding at all times, as the reality of an average worker’s life is oftentimes quite stressful.

One of my favourite things about Japan is the food, and I grew to greatly appreciate the culture of regional specialities. In most areas/towns in Japan, there are one or two different foods that are

famous and at times can only be found in that specific area. I found trying each of the new famous foods every time I travelled to a new location very exciting, and it offered an insight into the deep regional pride that exists around Japan. Each prefecture and area are slightly different in ways that are fun and interesting to discover. The best thing to do when arriving to a new area is to head down to the department store food floors and look at what kind of local products are on sale.

Another one of my favourite parts of life in Japan was of course the Japanese people. I experienced positive interactions with essentially everyone that I met, from coworkers, friendly old people in onsens and cafes, people on trains, restaurant and train station staff, and even strangers in stations and busy areas who helped me out when I was looking lost. This effect is even more pronounced the more Japanese you make an effort to learn – people will become excited, ask you many questions, and just generally be very curious and friendly. The good friends I made were some of the most considerate people I have met, and often remembered even insignificant things that I had said in passing in a conversation 3 or 4 months back. It is true that Japanese people sometimes do not convey their true thoughts very openly, but I found the process of becoming closer to people and watching the conversation relax and become more open a very interesting experience. I did not experience any overt discrimination aside from occasional unexplained empty seats beside me on the train or several restaurants with signs saying “only Japanese people” on the front of restaurants. Most of the perceived discrimination comes from unfamiliarity with foreigners, so I did my best to adapt to Japanese life as much as possible while still being open with people about my experiences as a foreigner, and that went a long way towards bridging the cultural gap.

Japan is an amazing country that has preserved its culture in meaningful ways while also embracing modernity and progress in others. It is a country of contrasts – traditional culture and modern ideals often mix in both positive and negative ways. There are problems, like any country; management, particularly in large traditional companies, is dominated by older males which inhibits progress, there are serious issues with gender equality, overwork, and inefficient use of time at the workplace, and the tendency to make comparisons of “Japan vs. Other Countries (海外)” creates what I believe is an unnecessary pseudo-competition between which way of doing things and carrying out business is better or worse. On the other hand, Japan is exceedingly safe, the culture is rich and interesting, great care is taken to handmade and artisanal work, and the people are generally extremely nice and willing to help given the chance. People will show genuine interest in you and your experiences both in Japan and abroad, especially if you express some effort into learning Japanese. If you are fortunate to make good Japanese friends, you will feel a sense of loyalty from them that you

may not share with others. Like any country, there are positives and negatives, and it is important to be mindful of all those aspects as you navigate through the short time you are in the country.

## **Conclusions**

Overall, this experience was easily the most transformational and important time of my university career. I learned many things about new research topics, life in a new country, and about myself. Along the way, I made many friends, had unique, once-in-a-lifetime experiences, and immersed myself in the culture as best I could. Undoubtedly, my personality has changed quite a bit due to this experience, and I will always carry the lessons I learned in Japan with me from now on. Through this experience, I realized my desire to continue being a part of international collaboration in research efforts and to attempt to foster more intercultural understanding and relationships across the globe. Simply put, it has been a transformative experience, and I am glad that I experienced every second of it. Thank you again to everyone at DNP, UVic, CJCP, and my family for making it possible.