

# MY EXPERIENCE IN JAPAN

## The Yamagata-Andes Nations' Double Triangle Program – 2017

*Robert Alonso Aduviri Choque*

---

From July 31st to August 14th, I participated in the Yamagata-Andes Nations' Double Triangle Program, where I had the opportunity to visit Japan together with five Peruvian, two Chilean and two Bolivian fellows. During all those days we could learn about and experience the vast cultural and technological richness of Japan. We visited lots of museums, shrines, temples and so many historic places that we could truly experience the majesty of Japanese traditions and history, and at the same time we had the opportunity to visit top-tech companies and laboratories where we could get in contact with advanced technology. All of these was coupled with many informative and compelling lectures that sparked some really interesting ideas that can be applicable to our South American countries. Moreover, we could get in touch with many Japanese students through many enjoyable activities, having the chance to know more about their points of view about the world. The following is a summary of all the things I learned throughout this unique adventure.



*Japanese painting at the Uesugi museum*

During all these visits and lectures, I could perceive a strong synergy between the academia, the industry and the community. Thanks to the high amount of innovative technology and knowledge that is developed and researched in the academia, the industry is able to apply it to produce new and better products that can improve the quality of life of the community, and thanks to this the community can prepare better researchers and better personnel for both the academia and industry. Therefore, I could see how this leads to a virtuous circle for regional development, and how the human resources are the key factor in their success. Furthermore, in the Kojirakawa Campus of Yamagata University, we learned how methodologies such as Problem Based Learning foster this interaction and can prove to be a good approach to school education.



*Yamagata Museum of Science and Industry*

What is more, I could see how to ignite passion for science in young generations, as we saw in the Yamagata Museum of Science and Industry, which has so many different activities and experiments that explain scientific concepts in a fun way, and I also learned how to teach nutrition in a very fun and enjoyable way, as we saw in the Yonezawa School of

Nutrition. The nutrition simulator allowed us to select high-fidelity display food and dishes to check the nutritional value of the food we eat every day, making the task of combining food to get a balanced diet astoundingly easy and fun.

At Yonezawa, we could witness the development of really advanced technology. One of the technological achievements that captured my attention was the Organic LED (OLED) display, which is actively researched at the Yonezawa Campus of Yamagata University and the Innovation Center for Organic Electronics. This technology allows a very efficient energy consumption and a more natural source of light at the same time. We could see it in action during our visit to the Smart Future House, where it could even provide energy to indoor plants through photosynthesis. I believe it will be just a matter of time until such technology becomes a standard.



*Nutrition simulator at the Yonezawa School of Nutrition*



*OLED display at the Innovation Center for Organic Electronics*

We could also witness a full implementation of Kaizen continuous improvement inside NEC, a computer manufacturing company, and how it truly leads to more efficient processes and higher-quality products. Furthermore, we could notice how Kaizen takes pride in the acknowledgement of employees' opinions and suggestions to improve the processes at the company.

At the Faculty of Agriculture in the Tsuruoka Campus of Yamagata University, I learned about different and innovative methods to grow more nutrient-enhanced plants that, although they were used in the past, during the Japanese economic growth, they can still prove to be beneficial to developing countries that are in the need for nutrition-efficient nourishment.

Besides this, at the Tsuruoka National College of Technology, I discovered how we can improve the technical education quality and produce more jobs by performing industry collaboration focusing on industry need-based education, revaluing the technical education that is so underrated in Peru.

One thing I could perceive while we were moving between cities in Japan was that the transportation system was really efficient and many of the houses and stores we visited had pretty much the same services and comforts no matter if we were visiting an urban or rural area, like the washlets and the automatic doors. Thus, I found that there is a high level of technological uniformity across the country.



*Outside view of the Yonezawa-Tsuruoka road*

Later on, I discovered that in the past, a route system established by Tokugawa Ieyasu in the 1600s made possible to reach faraway regions in a short amount of time and to facilitate the spread of

technological and cultural development across the country. Since I know that many of the South American countries do not generally have an efficient transportation system and there are many rural areas that are left behind and do not have the same opportunities or even basic services that major cities have, I believe that development in this area can have a really high impact in our countries.

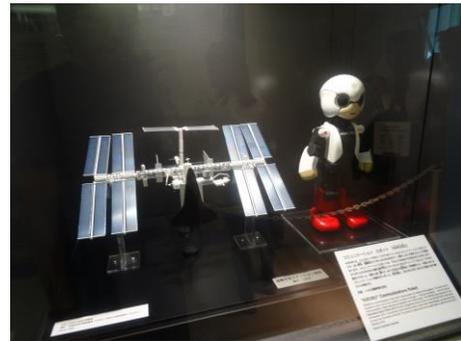


*Panoramic view of Tokyo from the Tokyo Sky Tree*

Moreover, I could find that this focus on transportation was one of the key factors in the emergency response after the Great East Japan earthquake, as we learned during a lecture given by Professor Ayabe at the Yonezawa Campus of Yamagata University. One of the top-priority actions in the aftermath was to clear and reconstruct the main roads, which allowed the humanitarian relief supplies to have a higher reach to the victims of the earthquake. Furthermore, the organization of volunteer bodies, such as Volunteer Yamagata, proved to be a very flexible complement to government agencies, making quick decisions and

extending the distribution of relief supplies on areas out of the government's reach. In addition to this, the participation of many disaster experts who had a previous experience in the Great Hanshin earthquake was crucial in making effective policies and decisions in the various aspects of disaster response management, thanks to their advice and recommendations. This made me think about the possibility of developing a disaster management decision support system based on the experts' experience and the collected information of the disaster status, which could be possible thanks to the recent advances in Artificial Intelligence and the wider availability of data, which is my field of specialization.

Following our expedition in Yamagata, we stayed in Tokyo for a couple of days. I admit I was a bit shocked with the suddenly large amount of people I could find there. Nevertheless, I can say the experience was quite unique and very enjoyable as well. We visited beautiful historic places, like the Sensoji Temple, awe-inspiring modern places, like the Tokyo Sky Tree and the Odaiba National Science Museum of Emerging Science and Innovation, and pretty fun and amusing places like the Akihabara district and the Pokemon Center at the Ikebukuro district.



*ISS exhibition at the Odaiba National Science Museum of Emerging Science and Innovation*

Thanks to all the things I learned, my plans for the future are to apply them in Peru. I will start by checking if any of the ideas I have are being implemented or if there are plans for implementing those. According to this, I will spread the new ideas and I will participate and contribute in their development from my academic background. For instance, I would like to further research about the use of Artificial Intelligence and Operations Research in



*Sensoji Temple in Asakusa district*

disaster response decision support systems, which I believe will not only be helpful for Peru, but for the rest of the world. I really enjoyed my stay in Japan and although it was just two weeks, I cannot imagine what it would be if I could stay longer. There are so many things to see and learn that I definitely plan to return to Japan in the future, likely for graduate studies and research. It has been a month since we were in Japan, and I will cherish this amazing adventure forever. I met so many kind people, strengthened the bonds that I had with my friends and made a great amount of memories that are going to last for a lifetime.

**どうもありがとうございました！**