

Follow Up Surveys with Past Participants

The purpose of the AGL follow-up survey of past participants is two-fold. The first is to confirm the educational achievement of the program through the current situation of past participants. The second is to refine and enrich the AGL educational content by collecting valuable insight.

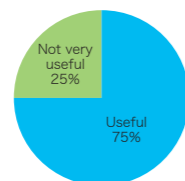
Responses to the Questionnaire for Past Participants

What was the most effective educational content in AGL related to your current occupation?

- Dojo education in general
- Off-Campus Education Programs (current workplace is the Off-Campus host organization)
- Accounting seminars and negotiation skills training
- Lectures and discussions with representatives from various business organizations
- Gaining broader perspectives by learning various topics and through discussions (numerous useful topics were covered)
- English communication experience

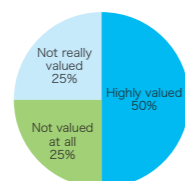
Is your doctoral degree useful in your current or future career?

- Useful 3
- Not very useful 1
- Not useful at all 0
- Don't know 0



Do you feel you are valued as a doctoral degree holder?

- Highly valued 2
- Not really valued 1
- Not valued at all 1



Based on your current work duties and experience, what abilities and skills should AGL train?

- Media Literacy (Habit to verify facts)
- Project management and teamwork
- "Risk management ability", "judgement", and "future prediction" in practical work duty
- Ability to produce results within a "limited time"
- Ability to prioritize and act accordingly
- Ability to discover issues from a unique point of view
- Ability to advocate for your own opinions
- Ability to absorb scientific knowledge
- Discussion with people from different fields
- Communication abilities beyond generations and nationality
- Attractiveness as a human being
- Meaning of generating profit for society
- Ability to present to the general public
- English

Opinions (Requests for AGL, etc.)

- AGL pushed me to enter the doctoral program, and if I entered the program without joining AGL, I would've regretted it. AGL was integral to my studies while at the university.
- I learned various concepts through AGL, which were not possible to learn from the general educational curriculum. AGL should be expanded in the future.

Other Activities

Date	Activities
2016.12.2	AGL FD(Faculty Development) Training
2017.1.23	Inspection of the committee members of Program for Leading Graduate Schools
2017.2.24~3/5	Excursion to Vietnam
2017.3.11~13	High school students Camp in Tokyo Project
2017.3.14~16	d.school comes to Tokyo TECH

Responses to the Questionnaire for Past Participants' Current Workplaces

For your current or future business, how valuable is the past participant's expertise (including analytical skill and adaptability)?

- In addition to deep expertise knowledge, the past participant possesses a wide knowledge of other fields and social issues. Because issues are becoming more and more interdisciplinary, possessing knowledge in a variety of fields is extremely useful.
- The past participant has high levels of universally necessary abilities to execute research such as strong analytical skills and adaptability. The participant effectively employs these abilities in actual tasks.
- There were some difficult areas, but the participant has relatively high levels of various skills and is eager to grow. Therefore, we believe that the participant will be able to show great abilities in more important duties in the future.
- The duty does not provide many opportunities for the participant to use his expertise. However, he applies general scientific background knowledge to work on the assigned development project. Although new, he is already acting as a great workforce, and had a much better responsiveness when dealing with matters compared to recent new hires with master's degrees.

In terms of the participant's ability to look at the big picture, communication, and consensus building skills, how valuable are they for your current or future business?

- As expected, the participant's research and communication abilities as well as PC operating skills were much higher than other new graduates.
- The participant is able to think flexibly and possesses strong communication skills as well as a wide knowledge background. Since the participant mostly works in an organization or a group, this ability is useful as a group member and as a leader.
- In the department where the participant works there is currently not a holistic and practical research case with consensus agreement with other industries. Therefore, we expect the participant to be the first to achieve such a success due to his outstanding consensus building skills.
- The participant already had high abilities, and we are very satisfied with him. He's competent when executing work duties. He has outstanding English speaking ability, and we value him as he actively takes initiative to communicate with members who are not good at Japanese. He also possesses strong communication skills when communicating among Japanese colleagues, and has no problem carrying out tasks with all levels of people. In the future, we want him to advocate for his opinions more.
- The participant effectively explained the assigned theme and related issues to superiors and stakeholders with concrete evidence based on knowledge and theory. The participant can persuade and make people understand. He has strong negotiation and communication skills.
- The participant constantly tries to gain more practical and expertise knowledge, improves skills to apply in the work duty, and demonstrated a positive attitude towards performing tasks.
- The participant did not have sufficient skills to look at the big picture and use various framework tools in a problem-solving based approach. However, we understand more experience and OJT are necessary.

As a general belief, please tell us what you expect from a doctoral degree holder.

- High expertise and skills 3
- Intellectual curiosity towards other fields 2
- Critical and analytical thinking as trained in academic processes
- Flexibility without being restrained by area of expertise
- Interpersonal skills
- Ability to discover issues
- Using exceptional experience and sharp strength in a certain field as a weapon to influence people around them.
- Basic academic skills, especially knowledge of mathematics in university general education level
- Logical writing and documentation abilities
- Basic information literacy
- Ability to understand an English document
- It is desirable to be able to speak English. Understanding other cultures is a plus.
- In terms of diversity, gaining employees with doctoral degree is an important issue for the business side.

Opinions etc. (Requests etc. for AGL)

- Instead of forcing, encourage participants to become more multifaceted voluntarily.
- Please continue to send promising workforce into industry.

AGL NEWS

Academy for Global Leadership

009

Off-Campus Education Programs

Off-Campus Education Programs at AGL

"Off-Campus education", which is considered to be as important as the Dojo program in AGL's educational system, is an opportunity for students to review and recognize which skills they need to improve through their practical experiences at businesses and research organizations inside and outside Japan. Each student affiliated with AGL spends approximately three months working at an organization, where he or she applies the expertise acquired through graduate work as well as various AGL activities, which build leadership, communication skills, and confidence. Additionally, the Off-Campus education allows students to recognize how much of their current skill set is transferrable to real society. As a general rule, students enroll in the program in the middle of the curriculum instead of the end, allowing students to incorporate real-world experiences into their studies; due to the timing of the doctoral dissertation research activities, many participate in the second semester of the first or the second year of the doctoral curriculum.

Each student plans his or her own project from scratch. Consequently, the Off-Campus education contents and contexts vary, enabling students to tailor their experience to match their career plans or interests in social issues. Prior to the actual Off-Campus projects, there is a preparation period called the "Off-Campus Projects - Introduction". Activities during this period include finding a host organization, drafting a contract and agreement for the projects, and coordinating logistics such as procuring flights, lodging, and visas, if necessary. Although the off-campus coordinator, the director, and the office members support the students, the students are expected to decide on their own. These experiences create a great opportunity for the students to contemplate their future - how to live and what to do.

Once the preparations are complete, each student starts working on a practical project at the host organization. This is the "Off-Campus Projects - Practice". The content of each project and what they observed are as described in the following reports. As the saying goes, "Nothing ventured, nothing gained". Because the students are busy preparing for their dissertation research thesis, they are often conflicted about spending three months working on activities far from their research. However, the value of the experience is undeniable and cannot be gained within the confinement of the research laboratory. Consequently, this experience is undoubtedly useful, and students report that the Off-Campus experiences in the real world help them learn and grow significantly. One of the most valuable outcomes is that the students can clarify their future career path. In fact, many current and past participants have decided to continue in the field that they experienced during the Off-Campus projects.

We are honored by the tremendous support from the businesses and research organizations accepting AGL students. We clearly see the impact and growth in the students based on their after-action reports, and are truly grateful to these outside entities. We hope for their continued cooperation and support in training AGL students.

Isao Satoh, Director of AGL

Summary of 2016 AGL Off-Campus Projects

The AGL Off-Campus projects requires students to participate in actual research and investigations at business organizations, other universities, and research institutions in and outside Japan for three months. On the surface, this program resembles a mid-to-long-term research internship or a study abroad program, but there is a big difference. This project, which provides students with a practical experience outside the university and an appreciation of the real world, assists students in achieving a clear goal while gaining insight on how to become a global leader. Thus, students are actively involved in the entire process from determining the image of an ideal global leader to selecting the appropriate location (Off-Campus host organization) for their projects and negotiating with the organization to accept them.

Since the inception of the Off-Campus projects, 20 AGL-affiliated students have participated, 5 of which are from this year. The outside entities vary greatly. Organizations include a US venture company, US public organization, other universities, a research lab in a Japanese business organization, and a foreign company's research institution located in Japan. Each student has achieved his or her goals, gained valuable experiences that cannot be experienced in a university setting, and learned much more than originally envisioned by working cooperatively with people not encountered in a university setting. Consequently, each student has returned with more maturity and better understanding of the world.

As you can see, within the AGL activities, the Off-Campus projects is extremely valuable as students grow and apply what they learned in the Dojo program.

Kenji Furuta, Off-Campus Coordinator

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Follow Up Surveys with Past Participants Other Activities



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Overseas

report 01

Document Survey of United States Military Forces at Japan's Okinawa Base at the US National Archives and Record Administration

The host organization : Nichimy Cooperation U.S. Office

From September to November 2016, I joined in an internship program hosted by a Japanese research corporation at its US office near Washington DC.

This corporation conducts numerous research projects for both the Japanese public and private sector, mainly using historical materials from the US National Archives & Records Administration (NARA). As an intern researcher on a team, I worked on a project focusing on US military bases in Okinawa, especially on the usages that could cause environmental problems such as soil contamination.

Although the research objective was clear, it was challenging to search for related materials due to the complexity of system and the considerable amount of resources at NARA. To overcome these obstacles, I conferred with my supervisor and asked archivists for their expertise on a number of occasions to find pertinent records so I could examine the original source. After finding important documents to the project, I had a deep sense of accomplishment.

During my internship, I was able to join trips to two sites in or near the DC area for archival research: 1) National Security Archive at George Washington University and 2) Brigadier General Edwin H. Simmons Marine Corps History Center in Quantico, Virginia. Throughout these experiences, I learned the many ways that archival records are managed in the US.

Finally, by living in the DC area, I was able to take advantage conferences and events held by think tanks and universities. Many involved in global agenda-setting. Through these opportunities, I networked with intellectuals, diplomats, and correspondents of media corporations. I am positive that these experiences, including the internship at NARA, are a significant steppingstone for me becoming a global scholar and citizen.

Shingo Hahimoto (3rd Year Doctoral Student, Department of Value & Decision Science)



A comment from the host organization

While Mr. Hashimoto pointed out issues regarding the way information management was done and the long-term validity of information from a researcher's point of view, our investigation staff also identified inherent problems. Consequently, we improved many aspects of information management. As a public survey company, we traditionally play a different role from researchers as we respond customers' needs. However, many aspects between our role and researcher are similar. Hence, our discussions were extremely fruitful. With his superb knowledge and flexible ideas, Mr. Hashimoto worked on everything with a sincere attitude, stimulating our staff. We have high expectations for Mr. Hashimoto's continued activities in the future.

Report 02

A Case Study of New Technology Introduction and Verification of a Possible Expansion into the Japanese Market of a US Biomass Venture Business

The host organization : ALL Power Labs

To investigate the applicability of ultra-small biomass gasification power generation equipment in Japan, I interviewed domestic prefectural government agencies and local governments, and participated in a three-month training at a venture company in the US. Biomass gasification power generation is touted as a renewable energy, mainly in Europe, but was recently introduced as a promising technology in Japan.

Among gasification technologies, ultra-small power generation equipment that provides electricity for about 20 to 50 households is an undeveloped market worldwide. Because I expect that it will attract much attention in Japan in the future, I decided to learn about this technology and investigate its availability in Japan by participating in the three-month off-campus project at ALL Power Labs (APL), which develops and sells ultra-small biomass power generation equipment in the US. I was part of the R&D team that focuses on power generation equipment and the development of the Japanese market. My efforts mainly focused on gas refinement, which is also my research field. I was responsible for designing and testing the refining equipment that I proposed.

The knowledge and experience gained through my research at the university should be valuable outside of Japan as developing my expertise is the most important aspect to become a "global leader". In regard to Japanese market development, I had a valuable opportunity when I participated in two-day negotiations between a Japanese company and APL as a translator. I also served as a facilitator and supported APL to reach an exclusive agreement for the Japanese market.

This off-campus project was challenging at times. Although I faced many difficulties such as finding a host company and acquiring the proper visas, overcoming each obstacle and the whole process turned out to be amazing experiences. These opportunities have helped me understand what is required to be a "global leader".

Shunsuke Nakamura (2nd Year Doctoral Student, Department of Environmental Science and Technology)



A comment from the host organization

Shun has been working diligently on all aspects of the gasification technology. This includes the technical understanding of the process in addition to the practical operations & maintenance.

Shun has a very good understanding of the business potential of the product and has assisted in business development activities to foster deployment of the technology in Japan.

He is doing excellent work during his internship in ALLPower Labs.



Domestic Company

Report 03

New material development using advanced surface treatment technology

The host organization : AGC Asahi Glass Research Center

My off-campus project involved working as an intern at the Research Center of Asahi Glass (AGC). I was assigned to a unit that conducts fundamental research for the development of new products. Because the research field differed from my doctoral research, I spent most of the first month reading papers on this topic. Although I only conducted experiments for the last two months, I feel I made progress, and that my results should advance AGC's ongoing research.

As a graduate student, my professor provides advice, but I conduct research by myself. As an intern, I had similar discretion with my research. However, how research was conducted differed from my university research experience. I was amazed how each member had his or her own "function" in the planning, experiments, measurement/analysis, etc. Because each member concentrated on his or her own role, the speed of the PDCA cycle seemed much faster than at the university.

At the start this internship, I was certain that I wanted to pursue a career as an academic researcher, but this experience has made me reconsider my options as working in industry would also be interesting. As my time as a doctoral student winds down, I feel the need to re-evaluate my path.

Ryota Takamura (2nd Year Doctoral Student, Department of Physics)

A comment from the host organization

Although the field of technology was supposed to differ from his academic studies, his ability to comprehend and question were outstanding. We were confident that he understood the role we asked him to play. During the practical work, he actively researched the literature and delved into content useful in the development. He made insightful suggestions and contributions, and functioned as a valuable member of the team. Although an internship is a great opportunity for a student to learn know-how necessary to be a responsible adult as well as a future engineer, he listened to our requests and never neglected work safety management. We were deeply satisfied with his attitude and efforts, and we believe his pleasant personality allows easily getting help from others.

Report 04

Learning about the Culture of Project Execution and Manufacturing in a Japanese Business

The host organization : Mitsubishi Electric Corporation Information Technology R&D Center

Just within the first week at Mitsubishi, I felt the sincere dedication and work ethics rooted within the engineering culture. I would say this period was an eye-opening working experience. I worked on the industrial network technology group within the Embedded Network Systems Technology Department. My primary work was on networking systems in factory automation. I evaluated key protocols for networking applications in next generation factory automation systems. I also did some work on secure infrastructure for control systems.

Although I had an incredible amount of technical experience and practical experience, I had a broader perspective of the engineering culture that is different from my experience in my country (could be similar with other Japanese engineering and manufacturing firms). Some fundamental concept that struck me most was to apply "5S" and avoid rework "手戻り." The former is a term for workplace organization, a method used to organize a workplace for efficiency and effectiveness. The later although could imply otherwise, it suggests the intent avoiding rework to ensure efficient workflow from the engineer to the clients with the aim of ensuring customer satisfaction.

Obviously, there is significant difference, between my country, mainly with the work ethics and dedication. This internship opportunity sincerely inspires me, and I will also play my part in the future of not only applying the experience at future organizational I find myself working with, but also, encourage these forms of attitude towards work in the younger generation in my country.

DZISSAH Daniel Agbesi (3rd Year Doctoral Student, Department of Information Processing)

A comment from the host organization

While technical difficulties have increased with development of product assessment, the participant was actively involved in the research. He understood the basic approach and attitude towards manufacturing jobs, allowing him to carry out the activities accordingly. We believe that his research results will surely contribute to the business.

Report 05

A Development Project for a Material in a global network

The host organization : DuPont Kabushiki Kaisha Japan Technology Center

Two months have passed since I started my Off-Campus project at Japan Technology Center, DuPont Kabushiki Kaisha. DuPont group is a historical chemical company known for developing popular polymers, including Nylon. I am part of the technical team of kalrez[®] for a semi-conductor manufacturing apparatus in Utsunomiya, Tochigi prefecture. The team members are very kind, and I'm working on several themes. There are some similarities between the research and development process here and the university, but I find it interesting that my efforts solve real problems and leads to new products.

This experience has made me appreciate all the support I have at AGL. I sometimes feel that designing a program by myself and presenting in three months are extremely difficult, but then I recall that the Off-Campus project is the capstone of AGL, which has taught me efficiency. I'm trying hard to present my originality by talking to the "Duponters" around me.

Yuri Iguchi (1st Year Doctoral Student, Department of Materials Science and Engineering)



A comment from the host organization

We asked the participant to simultaneously work on six projects, which is similar to the workload of a full-time employee. She understood the background of the programs and grasped a variety of business duties, including planning tests, assembling machines, risk analyses, performing tests, meetings for safety improvement program and business review, and communicating with people overseas. Due to her ability paying attention to priorities, we hope that he will continue to actively work on these programs.