



Global Inquiry 2017

Course Presentation in English

June 8 Thursday, 2017

Time	Presentations in Each Course	Locations
14:20	1. Role Model of Local Community	Floor 5 Science Room
	2. Ideal Sightseeing Tour (attracting people from overseas)	Floor 2 Meeting Room
	3. Prestige of the Products Made in Iwate	Floor 2 3-3 Homeroom
	4. Education Curriculum on Global Standard	Floor 4 Language Laboratory
	5. How to Accumulate Global Intelligence in Rural Area	Floor 4 Computer Room
	6. Role Model of Regional Medicine	Floor 2 3-4 Homeroom
	7. Science and Mathematics Course	Floor 4 Lecture Room

1. Role Model of Local Community

Group 1: Takizawa City

We will introduce the reason for starting this study. Do you know Takizawa City? Before, it was known only as Takizawa Village and it had the largest population in Japan. It changed to Takizawa City in 2014. Although it is a city, it is often unrecognized because right next to Takizawa City is Morioka City; the Iwate prefectural government city capital. How can we publicize Takizawa City? Then, we thought that by using Takizawa's *chagu-chagu umako*, it can be a place for sightseeing. The keyword is Travel of *Chagu-chagu Umako*. Now, it is held only in Takizawa in July every year, but we thought it was an effective measure to hold this event in other cities while simultaneously promoting and selling Takizawa specialties, such as watermelon and shochu. In addition, there is a possibility that cooperating closely with other cities and prefectures will make Takizawa a more vibrant city. Then, we went to Hiraizumi – a town with a large number of tourists – to ask for advice regarding that matter.

Group 2: What Matters is Kuzumaki's Identity

We suggest to take advantage of two events. The first is the event held in Kuzumaki. We target Iwate residents, and advertise the events on SNS or life magazine. SNS can spread quickly and a large number of people. Life magazine are read by wide generation people. So many people can know about the event held in Tokyo. We target young people who live in Tokyo, and advertise emigration to Kuzumaki. Nowadays, some people want to live in a place surrounded by nature. So, people will come to Kuzumaki to emigrate. This is how many people feel natural wealth of Kuzumaki, and find charm there.

Group 3: Increase Population and Develop Ninohe Using Ninohe's Specialties

The purpose of this study is that we want to increase population and improve the economy of Ninohe using local products. We are worried about the decrease in population of Ninohe due to declining birth rate and aging. We think that we should introduce the good points of Ninohe to other cities and prefectures to solve these problems.

Group 4: Study of Hiraizumi Town for Foreigners

Six years ago, the Buddhist heritage of Hiraizumi Town was registered as a world heritage site. The locals thought that many others will be interested in Iwate, and tourists, especially those from abroad will come to visit. However, according to RESAS, it is barely increasing. Furthermore, when it comes to foreigners, the proportion of those who visit as tourists to those who come to Iwate for other reasons (e.g. employment) is also low. Thus, we decided to study methods of increasing the number of foreigner tourists in Hiraizumi Town and developing Hiraizumi.

Group 5: Method of Stopping Depopulation in Morioka

In recent years, we have been often informed of the importance of depopulation. Our interest was sparked by the depopulation in Morioka. So, we studied to pinpoint the cause and to find solutions. We searched with RESAS and found out that the population in Morioka is decreasing. We supposed that depopulation could cause economic reduction and

decline in administrative service standard. As a result, more and more people could leave the town.

Group 6: For the Future of Kuji

The main objective of this paper is to consider and find what is needed to revitalize Kuji city. In order to do this, we sent out a questionnaire to high school students in Kuji. Then, we consider its results and make a solution that minimize a drain of young people to a big city. We constructed a hypothesis: by improving inconvenient transportation, we can minimize a drain of young people to a big city. According to the questionnaire, the cause of a drain of young people to a big city is decrease in employment and a lack of public facilities. We found a solution to the problem. It is to advertise Kuji and increase workplaces for employment and public facilities.

Group 7: Revitalization of Yoichi

We thought how “Yoichi” can be activated. We constructed a hypothesis that attracting foreigners to Yoichi is the key to the revival. Our goal is to attract foreigners to “Yoichi”. We searched in Yoichi to understand it from global point of views. In order to find whether Yoichi could be connected to global market, we counted numbers of foreigners in event booths.

Group 8: Hanamaki Must Be Changed

We have focused on Hanamaki City for two reasons. First, Hanamaki City is one of the premier cities in the prefecture, but foreign residence card was adapted in 2012. So, it seemed that globalization has not progressed much, however, we think it is possible to make use of good points of this big city. Second, we think that there are attractions, but it is not well-known, and the number of domestic and foreign tourists is declining year after year considering it has not advertised tourist attractions broadly since 2010. From the above, we think that it is necessary to attract foreigners by using the only airport in the prefecture and to create an environment that foreigners want to settle down in for the rest of their life.

Group 9: Morioka

Our motive is that, now, fewer people visit Morioka city, so we wanted to make a city with characteristics and we wanted many people to visit. The first study and the hypothesis are that many tourists pass Morioka. We considered that the cause is decreasing store and Morioka doesn't have characteristics. The purpose of this study is to spread the charm of the Morioka.

2. Ideal Sightseeing Tour (attracting people from overseas)

Group 1: Recreating and Revitalizing Iwate

By attracting foreign tourists to current Japanese tourism, foreign tourists who visit Iwate is actually less than that of major cities such as Tokyo, Osaka and Kyoto because we cannot convey the charm of Iwate well. To add to that problem, the difference in tourist expenditure between Iwate and other major cities is huge. The decline of economy is also a factor and it is only natural in Iwate where the population numbers are dwindling. Because of these factors, we plan to revitalize Iwate's economy through foreign tourists' spending such as on transportation, accommodation, recreational activities, and

shopping establishments.

Group 2: Five Senses

Iwate is surrounded by the beauty of nature and we can see a wonderful sight so we want to make a new tourism plan that makes use of tourist resource and lets people feel the area's characteristic and charms. Then we can introduce good points of the area, meet their needs and increase the number of guests.

Group 3: The Research of Economic Revitalization of Iwate through Hiraizumi

At first, we researched a change of the number of the tourists of Hiraizumi from 1990 as a first research to know general issues of Hiraizumi. As a result of research, from 1990 it was low but it increased in recent years since Hiraizumi was registered as a World Heritage Site in 2011. The tourist population is at a constant number now. Therefore we considered that to sustain it, we can use the effect of its world heritage title as a chance for development. In this research, we identified the problem and a solution for this.

Group 4: The Calendar of the Festivals for Foreigners

We are not interested in local festivals because only Sansa Festival is famous in Iwate. The reason is that local transportation and accommodations are not good. So, we are not interested in other cities. Therefore we thought if we make the Calendar of Festivals, we can make other local festivals more popular and increase tourists. Then we took a survey about Japanese Festivals. As a result, we found that foreigners are interested in Japanese traditions. Based on this information, we made the Calendar of Festivals and stuck it on the wall in Morioka Station. And then, we understood that only one calendar is not effective.

Group 5: The Activation of Industry of Sightseeing and the Local Wound Life by Smartphone Game

Ingress is mobile location-based game and recently, Iwate has used it to boost tourism. We had a hypothesis that Ingress has an effect on the industry of sightseeing. This paper examines how Ingress affects several aspects of the local tourist industry. We gathered information at Iwate Prefectural Office and arrived at the conclusion that it has an impact on sightseeing and tourist numbers. As a result tourists who want to play Ingress in Iwate are increasing in recent years.

Group 6: Sakagura Tourism for Visitors

We have proceeded to research on the theme of Sakagura tourism for visitors. In recent years, more visitors from other countries visit Iwate. We look over RESAS, local economy analysis system that is run by the Japanese government, and it shows that the number of visitors from other countries who visited Iwate was 20,503 in 2011. However, in 2014, it increased to 41,650. Nevertheless, Iwate prefecture doesn't benefit from these visitors enough. In order to get profit, we focused on Sakagura tourism.

Group 7: Tour Route Map in Iwate

The purpose of this study is to raise the popularity of local tourist spots and increase tourists in the prefecture. Iwate

has tourist attractions for each season which it can be proud of to the world. Despite this, tourists around the world hardly come because popularity of Iwate is less than any other prefecture. We want every tourist around the world to understand the charm of Iwate. Therefore, we made a “Tour Route Map” to call in tourists.

Group 8: Kenji World

Works of Miyazawa Kenji have been translated into 22 languages, published in many countries and enjoyed all over the world. However, the number of tourists who visit Hanamaki where Kenji was born and grew up in is about 350,000 less people than Tokyo. So we want to research for a way to let tourists enjoy Hanamaki from Hanamaki airport which is the only place that accepts international flights in Iwate.

Group 9: Tono

The purpose of this study is to increase foreign tourists and make money in Iwate. According to the data of the Ministry of Land, the number of foreign tourists to Japan has been increasing year by year. It reaches 10 million people in 2013, and it reaches about 20 million in 2015. But the number of foreign tourists to Iwate has not increased so much. So we focused on Tono and thought about the strategy to attract them and improve Iwate’s economy. We think to use the charter flight at Hanamaki Airport and iPad for Tono journey.

3. Prestige of the Products Made in Iwate

Group 1: Tofu Saves Local and Global Area

We knew the fact that people in Morioka city have consumed larger amount of tofu than any other cities from 1989 to 2013. We are interested in the potential of tofu and thought about the way of sharing its benefits globally. First, we joined tofu festival to search the present situation of tofu industry in Morioka city. After that, we wondered what kind of product should we develop and named it Toffy. Second, we made business plan of Toffy. For example, we focused on the convenience of eating tofu and made a hypothesis; if seasoning don’t spill, it will be eaten more easily and frequently.

Learning from the professional of trade, we improved that plan to be more beneficial for people in the world. As the conclusion, we predict what kind of benefits will be given by Toffy and what kind of global problem can be solved.

Group 2: Innovation of Iwate

Today, there is a growing demand for fast food so people cannot have a balanced nutrition. In this situation, we would like them to develop on interest of health to send dishes made of Tofu which is specialties of Morioka. We think that we need healthy food in the future. So we focus on The U.S.A which has large market. We suggest that “Tofu Hamburger”, which is made of Iwate shorthorn and Tofu which are specialties of Morioka. We think that the healthy oriented thoughts are growing in The U.S now, so exporting high nutritional foods of Iwate will lead to the improvement of the health.

Group 3: Urushi Going Global from Iwate

The purpose of this study is to spread *urushi* made in Iwate. We think that if the design of dish painted with *urushi* changes, it could become popular in other countries. As a result, we, designed a dish painted with *urushi* with the name of

“Bowl Which Grows with You”. This dish makes use of the characteristic of *urushi*.

Group 4: Aluminum Blanket

Iwate was damaged by the Great East Japan Earthquake six years ago. We heard that at the time, Iwate was so cold and there was no way to beat the cold in shelter. So, we sought useful things and practices if one was thrown into crisis situations.

Group 5: Yuru Characters

A purpose of this research is to make a plan that enables to develop business. To realize it, we focus on making use of “Yuru-chara”, which is popular local mascot in Japan, and traditional foods at the same time. We set up a hypothesis: Yuru-chara will be useful to keep your attention on traditional Japanese food, and also to attract foreigner’s attention, both can play an important role of export business.

4. Education Curriculum on Global Standard

Group 1: Global Standard for Education

The purpose of this study is to make a global education system. We based it on the hypothesis that points of global education system lie scattered across the world. We used the Internet and books to collect fine education systems from various countries and determine which characteristics will be useful in creating a global education system.

Group 2: Proposal of Educational Support to Develop Literacy

This study aims to solve educational differences between developed and developing countries. Today, there are a lot of global issues such as poverty, terrorism, and so on. There are many reasons that cause these problems. Since we take the education course, we decided to focus on educational reason -- educational difference. So, we started to research the literacy, which can measure the level of education. Through the research, we found that developing countries have “vicious circle” that makes their education worse. Plus, these cycles are deeply rooted in their culture and environment. This means providing learning materials cannot be enough. Therefore, we tried to create the idea that can make a radical change in this situation. Our study can be a big factor for improving global educational difference. Improving this difference can be a first step to solve many other global issues.

Group 3: Japanese Education and World’s Education

This paper examines Japanese education and world’s education. We researched it from three points of view; Japanese education, world’s education and “not global.” We thought Japanese people do not know even Japanese educational system rather than that system of other countries. It is important to know not only education but Japan.

Group 4: Human Education in Society Full of Information

Today, the volume of information in Japan’s society has been growing rapidly. Now, one of the problems is that media literacy, the ability to select truths from media, is not as widespread. In a society where there are false rumors and tricks, it

is important to have our own will or ability to judge. This study aims to think what kind of education is necessary in order to learn these abilities. We thought that we need to receive information-related education at an early age because it requires a long time to gain media literacy. We did fieldwork and made a plan of education. As a result, we concluded that the education about information is necessary and important.

Group 5: Education for Women

We studied the improvement of quality of women's education in a global society because we were interested in the difference of education among men and woman for various reasons. We researched a woman's education in Nepal as preceding studies and we know that the difference is influenced by the custom of the local community. Accordingly, we advanced the study toward disappearance of the difference caused by customs.

Group 6: English Education in Iwate

In the globalized modern world, global talents are required but it is difficult that all young people become such talented people and work around world. In addition, the region will not activate if the great talents advance to the city or to foreign countries. Therefore, an idea of "Glocal" is important. "Glocal" is a word that is mixed with two words "global" and "local". This word means that we have a view of international scale and act at the regional scale. We believe that if Glocal Talents increase, all young people may can work actively and the region may can be activated. Based on them, we considered that the opportunity of cultural exchange at the step of compulsory education is important, and decided that our subject is English education at the junior high schools in Iwate.

Group 7: The Innovation of View of Work in Compulsory Education -- the Actual Condition of "Karoshi"

There are various social problems in Japan. We think that these main causes are in Japanese education. So, we will begin to check what kind of education will help solve this social problem.

5. How to Accumulate Global Intelligence in Rural Area

Group 1: Changing the World through the ILC

The purpose of study is our motivation to investigate ILC both from economic and scientific sides. It seems that these do not concern each other, but while studying ILC we may find something innovative. As we began to study, we visited Iwate prefectural office to ask staff about ILC. We were afraid of the number of people in Iwate who do not know about the details of ILC. Moreover, even native people might not know about it. So we aimed at advertising ILC to various generations: from children to elderly people.

Group 2: A Plan to Build an ILC City

ILC (International Linear Collider) is going to be built in Iwate. Upon building ILC, we suggest to make ILC city. We constructed a hypothesis that the ILC city needs to centralize residences, entertainments, companies, and offices for smooth administration. The purposes of this idea are to respond to globalization and revitalize the local community. In reality, opportunities for people to work will rise through this construction. This process will make the local communities more

active because local work forces will increase. The centralization of living facilities will provide a comfortable life for the people from different countries. To make such an environment is important because it takes a long time to research and the people involved will have to stay there for a long time, too. Transportation should also be maintained as a necessary living function. However, we noticed that dealing with language concern is an important point to realize these plans including a practical transportation system.

Group 3: Influence of ILC on Nature

We will make a presentation about the influence of ILC on nature. The purpose of this study is to protect Iwate's nature from ILC project. We found that now the measures against the influence are not enough. Under the present condition, ILC project will have a negative impact on nature. If such things happen, we may have to stop the ILC project. ILC project is a very important study. So, we must protect nature for ILC project.

Group 4: This is ILC

We researched how to use the debris that was left behind when they drilled through a mountain to create the ILC tunnel. The debris has poses a potential threat to nature, so we must deal with the debris. Using research from internet and publications, we found one way to deal with debris. We can use them for residential buildings. The ILC project will gather a lot of overseas researchers, so we need more living accommodations. It is necessary to build sustainable residential spaces. So, we may as well build green buildings. A green building means an eco-friendly, environmental-friendly and sustainable building. Residential green buildings are being developed now. So we should think of ways to promote residential green buildings for ILC. We hope that by developing a new, environmental-friendly town for ILC, we will be a role model for the world.

6. Role Model of Regional Medicine

Group 1: Preventive Medicine without Doctors

Iwate is faced with a lack of doctors. So, we studied about preventive medicine. At present, a lack of doctors in Iwate is well-known, but it will take much time to increase the number of doctors. Therefore, in lieu of this, we surveyed preventive medicine that can be practical for ordinary people and considered the way of using it efficiently.

Group 2: General Practitioner

The main objective of this paper is to get everyone to understand the necessity of general medicine. Now, here in Iwate, Japan, the number of medical facilities and of doctors are decreasing. So, we thought general practitioners are very important. It is because they can take many treatments by themselves.

Group 3: Iwate Prefecture Salinity Weight Loss Plan

The top causes of death in Iwate Prefecture are heart disease and cerebrovascular disease. We aim to understand the cause and improve the practices in dealing with it.

Group 4: Study of How GABA Reduces People's Mental Stress

We studied about stress. Our purpose is to decrease the suicide rate in Iwate by reducing people's stress. Iwate prefecture has the second highest suicide rate in Japan. In 2015, 297 people died of suicide. In 2003, 527 people died of suicide. The suicide rate tends to decrease every year, but it is still high compared to other prefectures. There are many reasons for this like health- or family-related stress. Then we thought if we mitigate people's stress, we could lower the suicide rate in Iwate. To show the effect of GABA, we carried out one survey and one experiment.

Group 5: Local Medicine for Elderly Health

Dementia is a serious problem and the number of elderly people is increasing. One of the causes is the nuclear family. We used Kanegasaki's care system and tried to apply it to Tokyo, but it is difficult. So, we suggested a plan to make an exchange between elderly and children. Also, we noticed that we had been helped by many people. It is now our turn to return the compassion of the heart to every person who has trouble.

7. Science and Mathematics Course

Group 1: Research for Erasing a Blackboard Efficiently

We have been made exhausted by very dark lines on a blackboard. We have tried to erase them, which our teacher drew, in the short time between classes. In spite of our effort, we still could not. Because they often disappoint us, we decided to research some methods to clean up a black board efficiently. Please try them!

Group 2: Medical Herbs

We are going to show our study about Medical Herbs to you. You may hear the word herb, but may don't know herb technically, especially where and how medical herbs help our lives. When we had no medical technology, the herb was useful to us through pioneer's experiences. So we wondered whether the effect of the herb used in therapeutic cults is really effective or not, and we decided to check it through experiments on *origias rapities*. Herbs are mainly classified into two kinds. One is "Kampo medicine", another is crude drug. The former is processed and made dry, and the latter is used raw. This time, we decided to detect the herb and pick out ingredients and use as a crude drug. In our experiments, considering various ingredients, we decided to use the herb called senkyuu. Its effects include being an anodyne, subsidence, blood resupply, and nutrition tonic. We paid attention to that, specifically as a nutrition tonic.

Group 3: The Best Partner of Rice Ball

Have you ever brought rice balls to the school? Many students may have brought them because they believe that it is rice balls that improve our health. But do you know there are some problems behind rice balls? One of the bad effects is "food poisoning". Oysters and sashimi may be the first thing to mind when it comes to food poisoning, but in fact, rice balls often cause food poisoning. Virtually, there are almost 30,000 patients on Japanese annual statistics of food poisoning.

Then, we thought, "Can we make rice balls better and safer for humans by researching about food poisoning?" In this research, we focused our eyes on the staphylococcus bacteria (*oshoku budo-kyukin*). The bacteria are main cause of food poisoning. If you get infected by it, you may experience bad symptoms such as stomach pain, vomiting and diarrhea. And

they are concealed in our bodies, particularly our hands.

Group 4: The Relation between Sound and Sprouts

This research was carried out to find what element of sound influences the growth of plants. It is considered that physical elements of sound are factors to cause differences in growth. The experiments focused on waveform affecting plants. However, it is revealed that waveform doesn't have an effect on the growth of plants. It is concluded that frequency is the main factor.

Group 5: An Ideal Soap Bubble

We researched about big, long lasting soap bubbles for children. The main purpose of this study is to look for the best material from commodities which can generate such soap bubbles when it is mixed with liquid soap. We measured the strength of the plain soap films and the maximum size of the soap bubbles in each materials. Finally, to reproduce a realistic situation, we floated the soap bubbles on the air in the form of perfect globe by using dry ice. Throughout the experiment, we confirmed that the best material is honey.

Group 6: Run! Longer than My Life

A dry battery is useful, but it has a limit on generating electricity. With a Japanese toy called Pla-Rail, we did experiments to determine how to use it for a longer duration and get the maximum power. We tried two ways, one is by cooling and another is by operating the toy with some intervals between uses. However, cooling was bad for a battery. Alternatively, heating it is better. Interval usage was also good for a battery, however our experiments also showed that a long interval was not always effective. Then, we found that a combination of these two methods to have the best effect. As a result, it runs longer than normal one. Therefore, we found that heating and intervals are good ways to use a battery longer. We will consider how to use them in our lives.

Group 7: Creatures' Ability to Regenerate

We were interested in the regeneration system, especially iPS cells. That's why we decided to clarify how the kinds of feeds influence animal bodies' growth. We experimented with the newt and planarian. We found out that protein and zinc strongly affected their growth because they form bone cells. We could not get accurate data with the use of heme iron and vitamin C. As for the planarian, they have strong bodies only in field of regeneration, but it is very weak at the smell of feeds. To our regret, we couldn't accomplish our goals. However, through this experiment, we have acquired a stronger interest in the use of regeneration in medical treatments.

Group 8: Japanese International Birdman Rally from Math and Science Class

We searched about JAPAN INTERNATIONAL BIRDMAN RALLY. The Birdman contest is held on the Biwako Lake every summer. They have three categories: Glider Course, Time trial, and a Distance Race. We chose to study the Glider course. Last year's top score is 443. So we set our aim to fly 20 meters.