

Abstracts

**SGH**

**All Japan Super Global  
High School Forum 2018**



## How to decrease food waste in Japan

2601: Hokkaido Noboribetsu Akebi Secondary School

Key words: food waste, legal, letter of demand

### 1. Introduction

People suffering from hunger all over the world need about 4 million tons of food per year, while food waste in Japan is about 6.4 million tons per year. This problem is very serious. So we researched about it from different legal points of view. We have a law for companies to limit food waste and most companies obey it. However, the level of food waste is still increasing. We thought household are also related to this problem because half of the food waste is produced by households in Japan. In France, they have a law to prohibit companies from disposing of unsold food if it is within the expiration date. In addition, if some companies don't keep this law they have to pay a fine.

However, why don't we have such a law in Japan? So we set up two hypotheses to reduce food waste in Japan. Hypothesis 1 is that if Japan has a strict law on food waste like other countries, food waste will be decreased. Hypothesis 2 is that if Japan has a law on food waste from households. Food waste will also be decreased.

### 2. Methods and Results

In Japan, we just have a law on food recycling and it only sets a target rate about food dumping for each company. However, in France they have a law concerning the banning of food dumping. When people break this law they have to pay 480 thousand yen and they also have to donate unsold food. We knew that some companies had developed strategies by themselves because they think that food waste is a serious problem. For example, co-op Sapporo holds a food bank, Seven Eleven is trying to extend their expiration dates and AEON introduced the POS system to manage their stock. However we could not solve this problem.

### 3. Conclusion

As for hypothesis 1, the companies in Japan obey the present law on food waste and are trying to reduce their food waste. Making a new law is very difficult but at first we should start to make a local proposal to our city, Noboribetsu. We are trying to submit a letter of demand to Noboribetsu-city. The proposal is that people can bring home their leftovers from restaurants in Noboribetsu. We will cooperate with some restaurants which serve the famous local food Enma-yakisoba. We will put this idea in our letter of demand.

As for hypothesis 2, we realized that to make a law for households is too difficult because it is almost impossible to check if they obey the law or not. So, alternatively, using apps and setting up a system for food recycling are good ways to decrease food waste that is produced in households in Japan.

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# Revitalization of “the residents, by the residents, for the residents” with snow energy

SGH Number:2602 Sapporo Kaisei Secondary School

Key words: Revitalization with snow energy

## 1. Introduction

Today, population of developed countries are decreasing, therefore that of developing country will also decrease in the future. This is a serious problem because of it causes decline of economy. However, there is no concrete solutions. Therefore, we will propose sustainable measures for local residents.

## 2. Methods and Results

We interviewed the town office in Numata and Nishiyama Sakata electronic company in Asahikawa and did statistical data analysis. Through the interview of Numata, we found out two needs of Numata is good use of snow and achieving centralized city and make it compact. Then, we would like to propose a plan to realize them.

## 3. Conclusion

We would like to propose two plans done by people of Numata for the sake of Numata in order to achieve needs of Numata. One is cooperation over a wide area. The other is good use of snow in Numata. First, Numata city can be divided into four areas such as agricultural area, industrial area, the central area and tourism area. People of Numata should provide community bus service around Numata in order to make a smooth flow of people. Next, in order to achieve a further sale, we would like to brand vegetables and rice using snow energy. As a result, they can revitalize by reducing the size of city. This plan does not only meet the needs of Numata but also lead to sustainable development of Numata. The revitalization from eye on the residents is most important. Local efforts with “of local residents, by local residents, for local residents.” leads to global efforts.

## References

Our poster use a map from Technical Report of the Geospatial Information Authority of Japan.

## Awards

## Understanding the refugee crisis

### Why we need to be aware and active regarding the plight of refugees

2603 Sapporo Sacred Heart High School

#### Key words

Understanding and supporting refugees for peaceful coexistence

#### Introduction

**Through our efforts in coordinating with the United Nations, we set goals and took action to help refugees.**

#### Method and Results

Before this study tour, we carried out an inquiry-based-learning on refugee crisis based on the actions of the United Nations High Commissioner for Refugees and affiliated organizations. We then visited the Public information Division of the United Nations and the Ministry of Foreign Affairs to speak with professionals regarding their various activities. By doing so, we were able to develop a guideline as to how we take our own action plans.

We also heard the expression, “Refugees are praiseworthy, not pathetic.”

To understand the real meaning of this, we returned to Japan with the aim of collecting more information about a wide range of topics, and then implementing it into a practical action plan.

After the tour, we have thought about what actions are necessary for us high school students to carry out in order to aid refugee issues.

By regarding refugee crisis as a global (and thus personal) problem, we spread information on Twitter through our “High School Girls For a Globalized World” handle. We also joined a group called “Stand up for Human Rights” and wrote to Sacred Heart students around the world in an appeal for them to commemorate the 70<sup>th</sup> anniversary of the establishment of the Declaration.

## Using Gobo Waste Material

### Building Blocks made from Burdock

SGH No. 2604

Aomori Senior High School

Key words: vegetable, recycle, surplus, child, safe, block,

#### Introduction

We came to know about “VEGHEET” on TV. “VEGHEET” is an edible sheet made from vegetables. It can be used as spring roll wrappers and so on. We want to recycle surplus like “VEGHEET”. Also when we talked with ALTs, we learned that there are balls made from vegetable fiber in foreign countries. We thought about using the vegetables waste and aimed at reducing waste by making building blocks which are safe for children.

#### Methods and Results

We tried several procedures to make building blocks from burdock. First, we grated raw burdock, drained the water and extracted its fiber. Then, we shaped the fiber into a building block by hand and dried it. It was good because it was hard enough and didn't collapse easily. However it shrunk more than we had expected when it dried. Also it felt gritty. Second, we chopped in a food processor, and used a mold to make shapes. We could make it faster and it was easy to dry. However, it was crumbled easily. Third, we used boiled burdock. It was white and smooth, but it took a long time to dry and finally began to rotten. Lastly, we used raw burdock stalks. It was earthy and crumby.

After those trials, we visited a company called “Mizuiro”, which makes “Vegetable Crayons.” These crayons are made from Japanese rice and vegetable waste, so it is safe if children put it in their mouth. We met Ms. Kimura, who is the president of the company, and our plan attracted her interest. She suggested us to make a new product with her company. Then, she promised to contact a factory to conduct a safety inspection on our product. She proposed that we try mixing burdock with sawdust of the Hiba tree, starch powder or rice powder. She also told us that we should try making building blocks using other kinds of vegetable fiber. Now, we are thinking of conducting new trials according to Mizuiro's advice.

#### Conclusion

As for our prototypes, the first one seems to be the best, but we should try new methods to improve our product. In order to make the surface of our product smooth, we have to find out the suitable material to be mixed with burdock. Another problem to be solved is to find some companies to help us grate and press the burdock. If the companies cooperate with us, we can turn our idea into a commercial reality. If we could establish the method to make toys from vegetable waste, perhaps we can share it with some other countries. We also need to think about a global marketing network. We have a long way to go but we are doing our best now.

## Development of handmade environmental-friendly container for Cambodia using sugarcane fiber and traditional Japanese papermaking technologies

2605 Miyagi Prefectural Sendai Nika Junior & Senior High School

Environment problems, Cambodia, Garbage, Education, Japanese paper, Mekong river,

### 【Introduction – Three issues to be solved in Cambodia and Japan】

In Cambodia, there are serious garbage problems and decreasing of enrollment rate which caused by intense civil war. On the other hand, the number of successors of traditional Japanese Paper has been declining. To solve these problems at the same time, I suggest the development of handmade environmentally friendly container and collaborated production of the container with Cambodian Junior High School students.



Figure1 Illegal waste dumping in Cambodia

### 【Methods and results】

- 1) To learn common methods and materials of Japanese papermaking, I visited Mr.Tsukahara's workshop. He is a craftsman of Japanese paper.
- 2) With craftsman's guidance, I studied materials and methods suitable for Cambodia. I choose three materials, sugarcane fiber, newspaper and Okla slime. Also, we designed original tool for papermaking.
- 3) In August 2018, papermaking activities with Cambodian Junior High School students were conducted and we succeeded in making handmade sugarcane paper.

All materials were gotten in Cambodia.



Figure2 Papermaking with students

### 【Conclusion】

- 1) It is possible to handmade Bagasse paper using inly plants (ex: Sugarcane fiber and Okla slime) with technologies of traditional Japanese papermaking.
- 2) Papermaking activities are not only exciting for Cambodian Junior High School students but also good chance to learn environment problems.

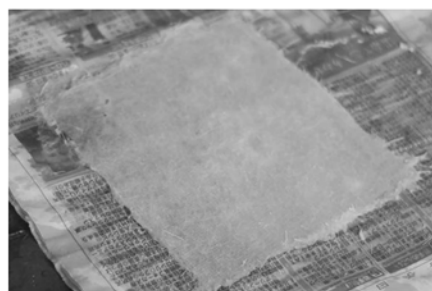


Figure3 Sugarcane paper

### 【References】

Tokushima Prefectural museum – Papermaking with weeds  
[www.museum.tokushima-ec.ed.jp/ogawa/kami/kami01.htm](http://www.museum.tokushima-ec.ed.jp/ogawa/kami/kami01.htm)

# The commercialization of OzHarvest Market

## Reduce and use effectively food waste

2606: Tsuchiura 1 Senior High School

Key words: Food Waste, Sustainability, Rescued Food, Imperfect

### 1. Introduction

In the world, there are 632 million tons of food waste. This is enough food to live starving people which are one of nine world people. We can largely reduce the starvation population if I reduce food loss. Therefore, we propose new style business dealing these foods as products and that is based on OzHarvest. The OzHarvest Market is Australia's first ever rescued food supermarket, stocked with produce that has either been donated or would otherwise go to waste, but is perfectly edible. Based on a 'take what you need, give if you can' philosophy, our purpose is to make rescued food available to everyone, especially those who need it most.

### 2. Methods and Results

We take notice of food less. The food loss that we think about are the food called "nonstandard products" that doesn't usually appear in the market such as insect-eaten and irregular vegetables. We felt that Japan's standard is too severer than overseas' one. By the way, there is a custom of "one-third rule" in the food industry in Japan. This is to divide the appreciation period into one third, the first one as "delivery term", the next third as "sales deadline", but this is not a law It is. If this delivery deadline is passed, it will be refused by many retailers and it will be impossible to deliver. We mainly think of three types of customers. One is university students who want to save their money on food. Second is people who live alone. Third is office ladies. We'll explain about business about our supermarket. We want to obtain nonstandard products from a factory and a farmhouse, In this case we buy them at 20% of the list price and intend to sell in 50%. We are going to open this supermarket approximately four times in a month and think that we hold it by a tent. However, we thought that it was difficult to run our business only this plan. So, we will make nonstandard crop into smoothie and sell them next to our supermarket to make gain.

### 3. Conclusion

The selling food which passed the freshness date for men and people who want to save their money on diet. But it is low rate of return. The smoothie tends to be popular for women and the boom of them help us sell them and they deem to sell well. We are thinking of starting this business first from Ibaraki prefecture. Also, if we make some profit there we will advance into major prefectures in Japan and want to spread to the world.

### References

*OZHARVEST MARKET* <https://www.ozharvest.org/what-we-do/market/>

世界の飢餓人口の増加は継続—最新の国連報告書 <http://ja.wfp.org/news/news-release/180912>

Ede, Rumi (2016) 賞味期限のウソ 食品ロスはなぜ生まれるのか. Gento-sha.

## Ride-share in Gunma!!

### Suggestion for revitalization of sightseeing through transport reform

2607: Gunma Prefectural Chuo Secondary school

Key words: Ride-share, sightseeing, foreign visitors, Gunma, transport

#### 1. Introduction

These days, the number of foreign visitors to Gunma has been increasing. Because we have Tokyo Olympics in 2020, it is expected to increase more. However, the transport in Gunma is so inconvenient that we feel uncomfortable in dairy lives. In addition, popular tourist sites are far from the principle stations. Train and bus services are also scarce. Instead, Gunma ranks high in car possession rate. We propose introduction of ride-share service into Gunma to solve those problems. Therefore, we suggest our plan to solve the problems by using the characteristics of Gunma.

#### 2. Methods and Results

We compared some ride-share services, Uber in West and Asia, Grab in the South East Asia, Didi chuxing in China, and Notteco in Japan from following several perspectives.

- How to pay the fare → Most services introduce credit card for payment. Only Notteco introduces the split of the bills.
- Application → It can break down the barrier of languages.
- Basic philosophy → Uber, Grab are for short move. Notteco is for long move.
- Law → People without special license aren't allowed to drive people to earn money in Japan. The split of the bills is legal.
- Security → In Didi chuxing, some assaults happened.

#### 3. Conclusion

Our proposal is "Guuber", an application for ride-share in Gunma. There are some issues in introducing rideshare in Gunma. First, ride-share will affect other public transportations, for example buses, trains, and taxis. To solve this, we suggest cooperation with them. Second, the range of age group will be narrow with credit card because the elderly people are unlikely to have credit cards. The third is about the law because we can't earn money by driving someone without special license. However, if we introduce the split of the bills, we can hardly gather the drivers. As the solution, we think of the point system. Security is a further problem to address.

#### References

uber.com, notteco.jp, grab.com, didiglobal.com, pref.gunma.jp, todo-ran.com



## Project of Good Sleep

2608: Takasaki Municipal High School of Takasaki City University of Economics

Key words: how to improve sleep

### 1. Introduction

We, students are not in good condition when we study late at night. At that time, we feel “good sleep” is essential for us to be healthy. We thought a lot of people may be suffering from lack of sleep and sleep disorders in today’s stressful social environment. Actually, our research shows that 20 % of adults in Japan have some sleeping problems. Lack of sleep could cause serious mental disease. So we would like to solve this sleeping problem. We participated in “The Business Plan Grand Prix” sponsored by Japan Finance Corporation and suggested a new business focused on good sleep.

### 2. Methods and Results

Our goal is to provide a service for people are to improve their sleep. We targeted private citizens as our customers because we found that there are few service for them and such service has often been supplied to only working people of some companies.

Our business plan: first, ask our customers fill out a questionnaire. Then we propose a sleep improvement program based on the individual questionnaire. In the program, our customers do some moderate exercise, get some advice from a counselor for stress reduction, and learn about some sleeping goods that are suitable for them. Also, we hire experts who have a great knowledge of good sleep and train our staff by them.

Not only planning a new business, we also had to think about how to make profits. Our budget plan: We targeted 44,000 people. The number is 20 % of working –age population in Takasaki City. We assumed that 2% of 44,000, 880 people could be our customers. We set monthly membership fee is 6,000 yen and estimated that total expense like labor cost, house rent, advertising cost is 66,630,000 yen per year. We anticipated that our profit would be 141,940,000 yen in 10 years.

Our business plan is virtual, so we cannot see the result of our plan.

### 3. Conclusion

We found some difficulties or risks to put our plan into practice. High medical knowledge is needed for our plan in the case of life threatening situations. Also we have to protect our customer’s personal information or data by strict security. We noticed that it is necessary to tie up with various fields of companies to run our company.

We tried to make our business unique and original and learned how hard it was to make differences from existing business.

### References

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## Learning from Danish examples to build a better future

2609: Urawa High School

Key words: Denmark, city life, agriculture, energy

### 1. Introduction

Denmark is known as “the happiest country” in the world. What is their secret? What can we learn from Danish people and their society? Energy and city planning are among the major key issues to be dealt with in order to build a sustainable society. Japan is also facing challenges in these areas. Twenty Urawa high school students visited Denmark to look for clues to solve the problems.

### 2. Methods and Results

Prior to the visit, we participated in a series of workshops guided by a tour coordinator who specialized in northern European countries. Five groups were formed and each group chose a theme to explore throughout this project: energy, city planning, agriculture, democracy, and education system. At the end of the workshop sessions, we had a valuable experience to visit the Danish Embassy to learn about Denmark through face-to-face interaction with the Danish Ambassador.

Denmark is a world-leading country in renewable energy production. During the stay, we visited a cogeneration power plant, where we listened to a lecture on how garbage is utilized to generate both heat and electricity simultaneously to meet the energy needs of the citizens. We also had a tour both inside and outside the facility, through which we deepened understanding of Danish ways of environmental protection and renewable energy production.

We also had a tour in Copenhagen, which is famous for being a bicycle-friendly city. The tour was guided by an art designer who is a Copenhagen local. He explained the city planning from the designer’s point of view. The city is designed and planned in a bike-friendly way, which facilitates the use of bicycles among citizens. The increasing use of bicycles contributes to the preservation of the environment of the city.

### 3. Conclusion

There are a lot that we can learn from the Danish ways. They emphasize the preservation of the environment over efficiency. This can be seen in farming, city planning, and energy production. We can also see that Danish people are good at making the best of what they have. They look for the strength of their environment, both in farming and energy production, and try to make full use of it. Furthermore, the most important thing we should learn from them is what significant roles ordinary people play in accomplishing common goals of the society.

In order to deepen our understanding and learn more from Danish ways, we are planning to visit Denmark once again. We hope that we can find more clues to build a better society in the future.

## Kawagoe Guide Map for Muslims

2610 Senior High School at Sakado, University of Tsukuba

Key words: Muslim, Guide map, Tourism in Kawagoe, Halal food

### Introduction

The number of foreign visitors from Islamic countries to Japan are rapidly increasing. For example, the number of visitors from Indonesia and Malaysia become more than double. However, it was revealed that there are problems among food because of the lack of the religious consideration or correspondence for Muslims in Japanese restaurants. Those kind of problems are said by the Japan Tourism Agency as well. To solve these problems I made a guide map for Muslims in Kawagoe.

### Methods and Results

First of all, I researched about thirty restaurants in Kawagoe and it was revealed that they also have lack of religious consideration or correspondence for Muslims because there is only one restaurant that provides Halal food. As a solution, I made two types of pictograms that could be put on a restaurant's menu. Figure 1 means the dish does not include pork and any ingredients originated from pork. Figure 2 means the beverage does not include alcohol. As a result, five restaurants accept to put pictograms on the menu.



Figure 1



Figure 2

Secondly, I made a guide map for Muslims. I collected Kawagoe's guide maps that are already published and analyzed these maps. Finally, I made an original guide map for Muslims, which includes Muslim-friendly restaurants.

### Conclusion

Based on my research, I found that Muslim-friendly guide map has a great potential for Muslim and restaurants. I would like to continue searching about the effectiveness of guide maps for Muslims.

### Reference

観光庁 (2015年08月26日)

「飲食店、宿泊施設等向けに「ムスリムおもてなしガイドブックを作成しました!〜ムスリム旅行者が安心して快適に滞在できる環境整備の促進を図ります〜」[http://www.mlit.go.jp/kankocho/news03\\_000137.html](http://www.mlit.go.jp/kankocho/news03_000137.html)

【閲覧日：2018/03/12】

## Onigiri — a product for marketing, a solution for hunger.

2611: Shibuya Makuhari Senior High School

Key words: Onigiri, In-flight meal, poverty, world hunger, washoku, japanese culture

### 1. Introduction

Inspired with the most local food we have in Japan, we propose a plan that aims to provide a sufficient solution for hunger while spreading the Japanese cuisine throughout the world. Knowing that the food situation in developed countries and developing countries are very different from one another, we realized that different plans which are best suited for the two areas are needed. Thus, we prepared two separate plans for each regions: spreading onigiri in developed countries starting by serving it as in-flight meals, and introducing onigiri in developing countries as a solution for hunger. We believe that these plans together will serve as a solution to reducing world hunger and making people's food life even more healthy and enjoyable.

### 2. Methods and Results

After looking at the characteristics of onigiri that attract many Japanese such as having unique and variable ingredients, its healthiness, and how it is very easy to carry around, we realized that serving them as an in-flight meal would be idealistic. It will be perfect for both airlines that wants to provide good meals so that customers have a comfortable flight, and for spreading onigiri to foreigners traveling to Japan. Therefore, we created a plan to serve delicious onigiri as in-flight meals to customers flying to and from Japan. In our plan, we provide customers with “Onigiri Leaflets” when serving onigiri, leaflets which introduces the features of onigiri raised above alongside with its history and nutrition. Customers will also be provided with a coupon of onigiri that they can use in popular Japanese food restaurants in the countries that they will be arriving at, after they post pictures of onigiri on social media. Thus aiming to make onigiri noticed among foreigners as much as sushi is. This plan will help foreigners realize through their flight experience and through social media the deliciousness of onigiri and its importance to the Japanese people.

Though many efforts are being made to reduce world hunger, it still is a major problem especially in areas of extreme poverty in developing countries. As we were doing research, we came across the Onigiri Action, a project by a NPO, TABLE FOR TWO that aims to solve world hunger. In this project, for each onigiri that gets posted on social media, 5 lunches will be provided to Asia and Africa. We thought that by spreading onigiri all over the world, people joining the Onigiri Action will increase, and as a result, reduce hunger in developing countries. Furthermore, we believe that by introducing onigiri in Africa and Asia using the ingredients that can be obtained locally, onigiri will become a solution against hunger in those places.

### 3. Conclusion

We firmly believe that our plan can change the world: not by money or fame, but through the most local food we have in our hands. Onigiri is a symbol of Washoku in which the food culture of Japan has developed and protected throughout its prolonged history. Our plan takes this food to its next level, as a solution of hunger and as a way to spread the daintiness of Washoku.

### References

一般社団法人おにぎり協会 Onigiri Society 「おにぎりの歴史」 <<https://www.onigiri.or.jp/history>>  
TABLE FOR TWO 「おにぎりアクション2018」 <<https://onigiri-action.com/>>

## **Water is Life 2018**

### **World Conference by High School Students**

2612 渋谷教育学園渋谷高等学校

Key words: water, world conference

#### **1. Introduction**

This summer, students representatives from around the world assembled to Tokyo for an international conference on the global issue of water. Prior to the conference, students were required to submit a research paper and prepare a presentation on their chosen topic. The cream filling, however, was in the seven days the students met face to face with each other. Student participants received feedback from both specialists and peers, and by genuinely sharing ideas, were able to gain a wider perspective.

#### **2. Methods and Results**

Among the participants of the conference were two groups from Shibuya Kyouiku Gakuen Shibuya High School representing Japan. One group focused on the education of keeping the Tokyo Bay contamination-free and went around to elementary schools to educate the young on the reality and future of the Bay. The other looked at ways to clean water in times of natural disasters so that people can have access to their lifelines. They conducted multiple experiments in order to create a dual filtering system that could be accessed by anyone on the globe.

During the second part of the conference, the student representatives separated into groups of around five. Each group was given a certain topic to create an action plan on. Research, fresh and unique ideas, as well as their interests in the problem of water crisis allowed for a very animated discussion. In the end, each group shared their action plan. This activity was led by the students of us and our sister school, who served as facilitators.

Water is Life 2018 received many positive comments by both the specialists and the foreign teachers, as it was one of the only global conferences to be supported heavily by student volunteers. Both middle schoolers and high schoolers from our school, as well as our sister school, volunteered in setting up, providing lunch, serving as facilitators, guiding groups around the Ariake Water Facility.

#### **3. Conclusion**

Shibuya Kyouiku Gakuen Shibuya Highschool will continue to input ideas into the world. Even after the conference, the two groups are still conducting research and experiments to form a solution. The students of our school will also, as a student family, continue to lead the world. Global issues, such as water crisis, is not something that can be overcome by the power of one person- but it is not insuperable. By hosting and participating in Water is Life 2018, our school was able to create and share a stage for us high school students to build upon.

## A New Additional Language Education Policy for Children with Foreign Backgrounds

Waseda University Senior High School

Key words: Education, English as an Additional Language, International Baccalaureate, Language, Japan, United Kingdom

### 1. Introduction

Today in Japan, there is a desperate need for foreign workers in order to fill up the lacking working population. The government has taken certain measures to bring in people from around the world. However, it can be said that language education for these people and their children are insufficient.

Needless to say, being able to speak the nation's language is a vital method for these foreign workers' families to blend in to Japanese society, and live their lives in this country. Therefore, we decided to research this important factor of language when bringing in workers and their families from around the world.

### 2. Methods and Results

In order to study about this highly necessary policy, we first looked at how our own country is doing in terms of Additional Language Education. Our research team went to public schools in Tokyo and reviewed how districts in Tokyo, Saitama, and Kanagawa were trying to teach Japanese children with foreign backgrounds.

Finally, we then decided to visit the United Kingdom to see how one of the cities with the largest foreign background population is coping with the influx of individuals from around the globe. The Students visited an International Baccalaureate grammar school in the vicinity of London, and a public school for children with a large variety of backgrounds.

### 3. Conclusion

After the research, we concluded that "Japanese as an Additional Language" education systems needed a thorough structural reform which includes obliging students to let the newcomer be able to merge into the environment where he/she is an absolute minority, as interaction is the best way to master language.

This means that the native Japanese students will need to interact constantly and fully with a child of foreign backgrounds. For such a method to succeed, Japan will need a full review of the "Learning Guidance Outline" to strengthen the authority of teachers in order to require schoolchildren to communicate.

### 4. References

平成 29 年度学校基本統計 (学校基本調査報告書)

<http://www.toukei.metro.tokyo.jp/gakkou/2017/gk17qg10000.htm>

Oasis Academy Southbank Pamphlet

Dartford Grammar School Pamphlet

# How can we reduce the use of plastics in everyday life?

## A Case Study of New Zealand

2614:Kosei Gakuen Girls' High School

Keywords: Environment, Plastics consumption, Single-use plastic awareness, New Zealand

### 1. Introduction

In 2016, the World Economic Forum announced that there will be more waste plastic in the world's oceans than fish by 2050. Many countries are taking action to improve this situation, and New Zealand is one of those countries who have committed to phase out single-use plastics by 2019. I carried out a questionnaire about attitudes towards single-use plastics in Japan and New Zealand, and it was revealed that New Zealanders have better awareness of the problems plastics create than Japanese. I anticipated that media outlets make people more aware of plastics and related problems. I did a fieldwork study in New Zealand for one year to find out why New Zealanders are interested in environmental protection, and how we can reduce the use of plastics in our daily lives.

### 2. Methods and results

First, for the observation, I went to Hamilton city and saw a lot of shops promoting the reduction of plastics. Then, I went to a school library and found a lot of books about single-use plastics. Secondly, I called an NGO, The Sir Peter Blake Trust to find out why New Zealanders have high awareness of single-use plastics, and they said that early childhood education, media influence and government involvement are the important things to gain the people's awareness of the danger of disposable plastics. They also mentioned that New Zealand has a lot of nature and that makes people feel the need to protect their environment. Finally, I carried out a seven days without plastic made products experiment to see what an actual plastic free life is like.

### 3. Conclusion

In conclusion, New Zealand people have a high awareness of environmental protection not only because of media influence, but also because they have lot of access to information in their daily lives to learn about the issues single-use plastics create, such as books in school libraries, shops which are promoting reducing the use of plastics, and such an extensive nature around the country. The education in New Zealand about the danger of plastics is better than in the olden days, but it is still not enough. To improve the current situation facing our oceans, it is important to create more opportunities for people to know about the problems caused by single-use plastic and start education about plastics from an early age. There are also a lot of things that we can start from today, such as using reusable shopping bags, stainless water bottles and choosing environmentally friendly products. The efforts each of us make can help to rid our seas of plastic pollution.

### 4. References

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# Awareness of First Aid at Schools in the Philippines

~ Dagupan City ~

SGH Number 2615: Junten

Key words: First aid, AED, CPR, The Philippines, SDGs No.3

## 1. Introduction

We need to save ourselves and those around us when necessary. Even if you are not an expert, you can save lives with basic first-aid knowledge and skills. According to the Tokyo Fire Department, 45% of patients are revived by AEDs in Japan. [1] According to the World Health Organization, heart disease is the world-leading cause of death. [2] In the Philippines, however, there is no specific data about AED use and its effect. Therefore, I went back to the Philippines this year to clarify awareness of AEDs and thought of how to spread their use. In this paper, first aid refers to help given to a person who has fainted or is injured until medical treatment is available. [2] AED refers to an apparatus used to produce defibrillation by application of electroshock to the heart, directly or through electrodes placed on the chest wall. [2] CPR is the manual application of chest compressions and ventilations to patients in cardiac arrest, done in an effort to maintain viability until advanced help arrives. [3]

## 2. Methods and Results

This survey was carried out through interviews and questionnaires between September 27th to 28th, 2018 in Dagupan City. The subjects were 88 students from La Salette School and Mangaldang High School, along with 3 teachers from Gregorio del Pilar Elementary School. Asked if teachers must be trained in first aid, teachers responded that it isn't necessary. A specialized teacher is asked to do a lesson, but some teachers still don't know how to perform CPR. In the survey, only 5% of respondents had an understanding of AEDs, while 73% knew only the word or didn't know it at all. There was better understanding of CPR, with 36% showing some knowledge.

## 3. Conclusion

Recently, The Philippines' government officially decided to place AEDs in public places. However, AEDs are hardly seen at schools or other crowded places. From the results of the study, we can say that many teachers are not prepared to teach students how to administer CPR or an AED. I have an idea for my next step. It should be more practical to hold lessons here so that those who go back may teach others. I will create my own plan in the hope of teaching the necessity of first aid, AEDs and CPR treatment in life-threatening situations, starting with teaching what an AED is and the fact that anyone can save a life by using one.

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# The Lack of Knowledge by the Younger Generations toward Politics in Japan

## The Younger Generations Have the Lowest Voter Turnout Rate of All

2616 Shinagawa Joshi Gakuin

Key Words: voter turnout, young generation, political campaign, sovereign education

### 1. Introduction

Since the Public Offices Election Act was enforced in 2016, the younger generations' participation in politics has been receiving a great attention. According to the Ministry of Internal Affairs and Communications, however, the voter turnout for ages 18 to 29 was the lowest of the all age groups despite the fact that the voting age was lowered from 20 to 18. Based on our experience of seeing American teenagers stand up against gun violence, we have come to feel worried that Japanese teenagers are not well informed to participate in political debates compared to those in America. To address this issue, we conducted the "One News Everyday" campaign and "the mock election" as a sovereign education in order to provide high school students with the information of the current political situations and the voting system in Japan.

### 2. Methods and Results

First, to raise young Japanese people's awareness toward politics, we conducted the "One News Everyday" campaign. In this campaign, we presented summarized news articles to high school students. Next, we showed them news clips related to the articles to enhance their understandings. After the two-week campaign, we implemented "the mock election". In the election, 18 students had an experience to vote for one of the three mock candidates who have different policies. In preparation, we interviewed two experts in the field of the sovereign education, Mr. Daisuke Hayashi and Mr. Yuki Murohashi. Mr. Hayashi, an associate professor at Toyo University, suggested that the earlier sovereign education is necessary for children. Mr. Murohashi, the leader of Japan Youth Conference, pointed out that it is also necessary to gain a better understanding of real policies advocated by representatives. Lastly, the participants answered a questionnaire that asked them which method was the more helpful to raise their awareness toward the politics.

The results revealed that 90% of the participants answered that the "One News Everyday" campaign was effective, because they were given constant opportunities to know about current incidents in our society. Furthermore, we realized that we were able to deepen our own understandings of the news through explaining them to the peers. With regard to the mock election, 94% of the participants answered that it was an effective way to know about the voting system. However, the others pointed out that just watching the short clips of the news was not very helpful because they could not discuss and share their opinions with others.

### 3. Conclusion

In conclusion, it was revealed that both methods, the "One News Everyday" campaign and "the mock election", were very effective to deepen the understandings of the recent incidents occurred in our society, which in turn raised our awareness toward politics. Although we received positive responses from those present at the mock election, it was considered that they were relatively eager to learn about the politics. To attract those who are not interested in politics, further investigation is needed.

## Creating a Society Where Women Are Beacons, and Everyone Shines

2617: Showa Women's University Senior High School

Key words: Gender, women leaders, diversified society, and minority groups

### 1. Introduction

There are a number of different Super Global High School programs being conducted at our school. Over last four years, we have created various study groups where we conduct research projects on various issues relating to gender. There are four groups. The first group has been focusing on 'Women in global management and entrepreneurship'. The theme of the second group is 'Achieving gender equality in Japan'. The focus of the third group is 'Japanese women making positive contributions abroad' in Cambodia. Finally the fourth group is exploring the theme of 'Promoting the advancement of women in developing countries', particularly in Thailand. Here we'll focus on the first three.

### 2. Methods and Results

(1) The first group: "Women in global management and entrepreneurship"

Mentor: Mr. Takeshi Hibiya, a former advisor of Fuji Xerox Co., Ltd.

Activities: We met with Mr. Hibiya regularly throughout the year, where we conducted seminars, and discussions. We visited several local companies, both large and small. As part of our fieldwork, we went on a study tour to South Carolina, in the USA, where we held a panel discussion on leadership with women working in various professional fields, and visited corporations such as Boeing to interview female executives working there. We learned that the three Ps were the keys to successful leadership. They are partnership, passion and people.

(2) The second group: 'Achieving gender equality in Japan'

Mentor: Dr. Naomi Inoue, a clinical psychologist

Activities: For our fieldwork, we visited a number of government agencies, such as the Bureau for Gender Equality in the Cabinet Office, and Urayasu City Municipality in Chiba to look at their policies. We continued our trips to Finland to further explore their advanced systems and practices to promote gender equality. Our visits included time at an ombudsman's office, a children's nursery, an elementary school and a high school, and also, a progressive furniture company run by a local female entrepreneur. We learned that the ration of women legislators in Finland is 42 % thanks to the gender equality law, while that in Japan is just 7.3%. This is supported by educational practice that fosters 'gender-free' awareness, which leads to a national 'gender-free' consensus.

(3) The third group: 'Japanese women making positive contributions abroad in Cambodia'

Mentor: Professor Yukiko Yonekura of Showa Women's University

Activities: We visited Cambodia to learn from Japanese women entrepreneurs working in Cambodia, after listening to a series of lectures on Cambodia from Professor Yonekura. Entrepreneurs are working to contribute to developing environmental sustainability and social justice. Our school took the initiative in organizing an annual two-day seminar with other SGH high schools who visited Cambodia for similar study trips, which continues to even now.

### 3. Conclusion

Through our study trips overseas and participating in various events, we've begun to realize the following: promoting women's leadership is a part of a more universal goal, which is to create an equal society where not only women, but 'every person' has the right for an education, to work and be productive and enjoy a healthy social life, where differences and diversities are welcomed and viewed as strengths. To create such a society, we believe that we need to work on improving both legal systems and society's thinking. For the latter, we've been taking a number of initiatives, such as conducting a 'gender-free' workshop, distributing fair-trade products, and creating posters and articles for our school. Each is a small step toward realizing a society where women are beacons, and everyone shines.

## Realizing a society ridden of gender stereotypes

~Why can't boys cry? What does it mean to be girly?~

2618 : International Christian University High School

Keywords: Gender stereotype - Preconceptions about attributes, characteristics or roles that are thought to differ from those of men and women.

### 1.Introduction

From the color of our backpacks to the types of sports we play, gender stereotypes have been something chiseled into our minds from a young age. As adults, we find ourselves bombarded by the media (and the people around us that follow suit) constantly using phrases to label men as strong and aggressive, and women as pure and dainty. Gender stereotypes, while omnipresent in so many aspects of our lives today, disintegrate the way of society from a political, economical, and cultural standpoint. It isn't hard to see the lack of awareness Japanese society has when compared to other leading countries around the world. In an age of globalization today, we feel the need to take a step back and explore the underlying issues that come with gender stereotypes for the future of not only our country, but ourselves.

### 2.Methods and Results

After months of prior research and planning, we took to the streets of Tokyo, once in late August and another in mid September, to converse with pedestrians about their take on gender stereotypes. By having everyday people write down their experiences on post-it notes to stick to the opinion board, we created a platform for others (and ourselves) to become aware of issues we could have never thought of in the first place. Moreover, we are currently planning to meet with the staff from UNWOMEN to take our project one more step forward into accessing what steps we can take in the future to realize a more inclusive society.

### 3.Conclusion

Through our research project, we were able to realize the different levels of gender stereotypes flooding our everyday lives. The first level is the unconsciousness we have in regards to gender stereotypes. As the gender stereotypes prevalent today are often times aligned to Japanese history and culture, flatly pointing out the "wrongs" in society will not absolve the problems we have. On the other hand, however, there is also another level, created by the clear action and purpose of the influencers in society: the media. It is no secret that media has been the sole cause in establishing gender stereotypes in our everyday lives. And to this, we must voice our "no"s and "stop"s. The goal of this project is to create an environment where one struggling under gender stereotypes can express their concerns freely. Only then will we be able to spark a dialogue in another person's mind to break the normality of gender stereotypes.

## Iran-Saudi Arabian relations and its effect on the Middle East

### The oil price politics in the Middle East

SGH Number: 2619 Tamagawa Academy Upper Secondary Division , Tokyo

Key words: Crude oil price, Saudi Arabia, Iran, Middle East, Geopolitics

#### 1. Introduction

Last year I conducted research on how to stabilize the unstable region of the Middle East. Though this research I theorized a new cold war-style conflict between the two largest powers, Saudi Arabia and Iran. The relation of these two nations in the middle east geopolitical stage is profound and seems to not have any ending in sight.

This year I based my research on the relations of Iran, Saudi Arabia, and the United States through the changing oil prices with the changing vision for Saudi Arabia's economy.

#### 2. Methods and Results

The research was based on a review of the foreign policy of Iran, Saudi Arabia and the United States. All of these nations have a profound effect on the geopolitical stage of the middle east.

Recently oil prices have been falling starting in 2014. After the price of crude oil hit a historic high in June 2008 they had been falling steadily until late 2014. Though they were sighted to rise again, once the 2015 Iran deal was signed prices started to drop again.

The Saudi economy is heavily dependent on the nations large oil reserves. However, the new leader of Saudi Arabia has been trying to change this through his "Vision 2030", and needs large oil revenues to fund this plan. On the contrary, Iran already has many non-oil industries and has similar crude oil extraction costs as Saudi Arabia. To combat this Saudi Arabia has been using its relations with the United States to limit Irans ability to export oil to other nations.

Another nation that is now not able to produce oil is Yemen. Saudi Arabia has been fighting one of the deadliest wars in recent history. This war could simply be seen as a campaign to limit Iran. However, it is also possible to theorize that Saudi Arabia is trying to use its military to create more revenue for its own oil industry.

#### 3. Conclusion

Iran, having a large population, a diverse economy and similar crude oil extraction costs, is looking to increase its influence in the Arab world. Saudi Arabia is using its special relations with the United States to limit the ability of Iran to export oil to other nations. The proxy wars these nations are conducting in places such as Syria and Yemen have a great effect on the stability of the whole region.

With Saudi Arabia needs higher oil prices more than ever before. They are working extremely hard to limit other nations ability to export their oil. With this it could also be theorized that Saudi Arabia is using the war in Yemen, not only to limit Iran's influence in the region but also to limit the oil that can be exported from Yemen.

I think that if foreign powers stop meddling in the middle east affairs, it would be easier to stabilize the region. In addition, these nations in the middle east need to find new industries to end their addiction to oil and not compete to export the same product.

My research is still incomplete and in its infancy. I would like to look into the long history of the middle and find out more about the baseline reasons for the instability in the region.

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#### Awards

2017第2回関東甲信越静地区SGH生徒課題研究発表会英語発表金賞

# How to Improve Our Eating Habits

2620: Ochanomizu University Senior High School

Key words: Dietary education

## 1. Introduction

Having participated in the international event, Asia Youth Leaders, held in Indonesia this summer, and through our interaction with fellow participants, we learned much about the eating habits of the Indonesian people and shared what we studied about ours.

We come to realize that the eating habits and health problems we shared were quite common. Zero hunger is one of the SDG goals to challenge this problem in the developing countries, but eating healthy, with improved nutrition, is also a problem we see in the developed countries.

## 2. Methods and Results

Comparisons were made on the eating habits of developing countries and that of the developed countries. Indonesia, as a developing country, faces a serious problem; the double burden of malnutrition, due to lack of knowledge, whose factors are underweight and overweight.

Japan, as a developed country, sees home economics as playing an important role in providing dietary education for children. The Japanese are educated young at school, with detailed manuals on how to eat healthy by making proper choices for nutritional food. However, Japan today, sees a pattern of “koshoku”, or “eating alone”, which remove meaning of eating excluding nutrition. While school education is important for obtaining the fundamental knowledge for “eating healthy”, this pattern that we see today in Japan shows that education, alone, is not sufficient.

## 3. Conclusion

First and foremost, home economics at school plays an important role teaching the fundamentals in making proper choices for a nutritional diet. It has been proven effective in countries where their schools actively take part in this education. Companies may also play important roles because they can be one of the most powerful, influential forces to move people. However, in the not too distant future, obesity may come next in line as becoming a social problem. Increasing awareness level of the problem, as well as providing information through SNS, one of the strongest and most effective social networking medium today, can be one of the most efficient means of educating people from here onwards.

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志村結美 大橋寿美子 2008 年「大学生の家庭科観」

## Awards

## Leveraging on Technology in response to an Aging Population

2621:Senior High School at Otsuka, University of Tsukuba

Key Words: IKIGAI

### 1.Introduction

Today, Japan is facing unprecedented problems in connection with its ageing society. To supplement the loss of its workforce, investment in technology is required. For the coming society, there are four key issues to be discussed: dissatisfied workers, decreased employment opportunities widening economic disparity, and social isolation of the elderly.

### 2.Methods and Results

To address all of the above four issues, maximizing people's "ikigai" using technology will be essential in our society. "Ikigai" is a Japanese concept that refers to something that can make people feel fulfilled, satisfied, needed, and worthy of everyday life. "Ikigai" is thought to exist in four segments: profession, passion, education, and connection. Leveraging on technology to create "ikigai" will be the key to overcoming most of the obstacles in our ageing society. Just developing technology itself cannot solve all the four issues, dissatisfied workers, decreased employment opportunities widening economic disparity, and social isolation of the elderly. By combining them with the idea of "Ikigai," it can lead to an effective solution.

### 3.Conclusion

Leveraging on technology to create "ikigai" will be the key to overcoming the obstacles that we face in our ageing society. We believe that only when these four segments of ikigai, which are profession, passion, education, and connection, are connected can there be a prosperous society in which technology can be an effective solution to all the issues related to our ageing population.

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### Awards

Outstanding Poster Award AT THE 12TH HWA CHONG ASIA-PACIFIC YOUNG LEADERS SUMMIT, July 27th, 2018

# A Social Business Plan Using Cacao in Vietnam

SGH Number: 2622

School Name: Kanagawa Prefectural Yokohama Senior High School of International Studies

Key words: poverty issue, cacao paper products, low rate of waste paper recovery

## 1. Introduction

While Vietnam's economy has continued to improve, the income gap between the people living in urban areas and the people living in rural regions has been widening.

Before visiting Vietnam for a study tour, we studied poverty issues in Vietnam. We also did research on several social businesses in developing countries. Following this research we framed our social business plan in order to help narrow the income gap between the urban and rural areas of Vietnam.

## 2. Methods and Results

During the course of our research, we learned about cacao farmers in Dong Nai Province, the location we were going to visit. We also discovered that the income of a cacao farmer is much lower than that of an average Vietnamese. Moreover, we found that the recycling rate of waste paper in Vietnam is very low.

Our business plan is to make cacao paper products using cacao husks — thin skin on the cacao beans — which are normally thrown away. We hope to use the husk and waste paper in Vietnam to create paper products and to sell them in Japan.

The first step in this process will be to have a Vietnamese paper manufacturing company buy cacao husks from cacao farmers and the waste paper from schools and public organizations. Next, the company will produce cacao paper products made of cacao husks and waste paper. Finally, we intend to import the products to Japan and sell them at schools. Then, part of our profits will go back to cacao farmers in Vietnam.

We presented this plan to university students and a young entrepreneur in Vietnam, in addition to consultants for international development in Japan. After our presentation we received a lot of encouraging feedback. Moreover, business people in Vietnam gave us additional ideas on how to be successful in their country.

## 3. Conclusion

The experience of the study tour in Vietnam strengthened our desire to carry out our business plan to improve the poverty issue in Vietnam. To make our business plan more feasible and profitable we have many things to do such as fund raising, finding business partners, and gathering more data about cacao farmers. With this experience we will continue to make improvements on this plan.

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## Awards

no awards

# Ideological Study of Delay in Legislation on Animal Experiments

2623: Yokohama Municipal Yokohama Science Frontier High School

Key words: laboratory animals, bio-ethics and ideology

## 1. Introduction

Recently, with the development of technology in Life Science, the number of experiments using animals has been increasing, and the problem is that legislation of laboratory animals in Japan is delayed in comparison with that in Europe and North America. Considering a difference of historical outlook on animals between those countries and Japan, I built a hypothesis that this delay of legislation was led by Japanese historical philosophy on animals from ancient times, which causes a feeling of cultural resistance to accepting the thoughts in Europe and North America.

## 2. Methods and Results

The study was composed of three sections: history and laws, thoughts, and studies and educations. Each of them was researched with books, articles and webpages. In addition to those, in the section of studies and education, I interviewed with professors of Laboratory Animal Science in University of Tokyo and Yokohama City University.

As a result, it was found that the laws relating to laboratory animals were established much later in Japan than in the Western countries. The oldest Japanese law about this issue was established in 1960 through the part of the rule of GHQ after the World War II while in Europe that kind of law was enacted in 1876. There is a gap of more than eighty years between those countries and Japan. While people in Europe and North America think about animals scientifically and rationally, in Japan, people think about them more emotionally. Also many of the thoughts concerning about laboratory animals are connected to the Japanese ancient culture, which causes Japanese people to have a feeling of resistance or antipathy to biological experiments using laboratory animals.

## 3. Conclusion

Before the World War II, the Japanese lived in rice cultivation society related to naturalism and animism, where they are emotionally connected to animals. After the World War II through a part of the policy by GHQ, there was an inflow of modern technology. The thought to use laboratory animals scientifically and rationally was also introduced. That caused so much difference of the thoughts between before and after the World War II.

In conclusion, Japanese people have the cultural antipathy to killing laboratory animals in experiments, and this caused the delay of legislation about laboratory animals in Japan. In the future, I'll research the history and modern thoughts of animal welfare, and study the alternation of the thoughts about laboratory animals in Japan.

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## A New Perspective of Education in Vietnam: Our Fieldwork Experience

2624: Kumon Kokusai Junior-Senior High School

Key words: Vietnam Fieldwork, Education,

### 1. Introduction

In today's world, there are many different themes that fit into the subject of global problems. Taking into account the 17 Global Goals for Sustainable Development, we chose to focus on the issue of education, a field that creates the foundation of a stable society. Global social issues may be challenged one country at a time and we chose to look at a country that has both historical and economic ties to Japan: Vietnam. Through our research of the education system there, we sought to understand the commonalities and differences between our two countries and to understand their educational problems in the hopes of contributing to a solution that would assist their national growth. By understanding and challenging the issues in one country we can help to build a safer and more stable global society.

### 2. Methods and Results

Our project team is composed of twenty-four 2nd year high school student delegates. Our study commenced in January of this year as part of our SGH curriculum which emphasizes a global standard of education with special attention to important global issues. We began our Vietnam fieldwork project by collaboratively compiling a "Vietnam Basic Survey Report" that allowed us to understand some of the social and historical factors that contribute to the current status of the education system in Vietnam. During our initial period, we invited an NPO to lecture us concerning current issues in Vietnam, and invited Vietnamese people in our community to visit our school where we participated in cultural exchange, conducted interviews, and shared opinions.

The fieldwork itself consisted of 6 days and 5 nights during our summer vacation. We traveled to Hanoi, where we held intercourse with the local people, met with ethnic minority groups, learned about the long history of war in Vietnam, saw the lasting impact of the use of Agent Orange by visiting a hospital and school that helps those suffering from its effects, and met with a representative of a company with Japanese roots and heard his opinions about the situation in Vietnam. We were able to observe the status of education in Vietnam when we visited educational sites including an elementary school, a high school, and a university. We talked with the students and faculty members and performed cultural exchange.

Through our fieldwork in Vietnam, we were able to achieve a more complete picture of life in a developing country. In terms of education, we were able to realize things about Vietnam's system that isn't easily learnable through books or online. We discovered that Vietnam has a need for teacher training in order to meet the demands of development. We also noticed that there is a strong focus on the sciences, which will help grow industry and infrastructure, but a lack of focus on the humanities that will help the Vietnamese understand their own history as well as the greater scope of global society outside of Vietnam. To address these problems, we think that the level of teacher education in Vietnam must be raised so that they have better tools to educate their students.

### 3. Conclusion

Our experience in Vietnam was different from how we originally imagined life in a developing country. We had a preconceived idea that "developing = poor and suffering." The Vietnam that we experienced was one of a people who lived with a sense of solidarity and pride, and who did not give us the impression of being "poor and suffering." Through this experience, we were able to understand our own prejudice.

Nevertheless, after returning to Japan and analyzing our collected data we determined that while the people of Vietnam live their lives in relative contentment, it is important to also look at their lives from a viewpoint of global standards. Problems such as the lack of infrastructure development in minority ethnic villages, poor hygiene, and the lack of educational tools and facilities that contribute to a low quality of education need to be addressed. Local people living their lives traditionally and without having experienced greater development are not disposed to address these issues, so they must be introduced and addressed from the outside.

We propose to help Vietnam reach a greater level of development by spreading awareness about the educational issues we discovered and by inviting people with different knowledge and perspectives to help contribute to a solution to raising the quality of teacher education in Vietnam.

We are currently working on establishing an SNS campaign that will unite people from all over the world with a common goal to combat the challenge presented by Vietnam's current education system. It is our hope that this ongoing project will benefit global society by allowing Vietnam to better participate in today's world and by being an example of how we can work together to effect positive change.

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## Is Toyama Bay Really Beautiful Or Clean?

2625: Toyama Prefectural Takaoka Senior High School

Key words: marine garbage, ocean acidity

### 1. Introduction

Toyama Bay became a member of “The World's Most Beautiful Bays Club” in 2014 because of its beautiful views and unique biodiversity. However, the dirty beach, Rokudoji, made us doubt that Toyama Bay is really beautiful. Moreover, we hear that ocean acidity has been progressing all over the world. Then we decided to research marine garbage and ocean acidity. Our goals are first to improve our fellow student’s awareness about ocean problems and their knowledge of marine garbage, and second, to understand why ocean acidity happens and how we can measure it.

### 2. Methods and Results

**About Marine Garbage:** In the first survey, we checked the awareness of students in our school and found that those living in inland areas had lower awareness than those living close to the sea, and their ideas about the source of marine garbage were wrong. Second, we conducted a cleanup activity at Rokudoji beach followed by a lecture, and surveyed participant’s awareness after it. We found that their concern about ocean problems had increased and they had gotten correct knowledge about the source of garbage in Toyama. Finally, we will carry out another cleanup and survey in November. We hope that student’s awareness and concern will have increased thanks to our activities.

**About Ocean Acidity:** According to Keiji Horikawa, an associate professor of Toyama University, we found that sea water absorbs about 40% of CO<sub>2</sub> released from burning fossil fuels and that the pH of the sea water becomes lower. Ocean acidity does harm to sea creatures which have calcium carbonate shells. To confirm it, we are doing an experiment; in October, we put 25mg fossils of foraminifera into buffer solutions with five different pH levels. One month later, we will observe the change. We expect that the foraminifera will be damaged.

### 3. Conclusion

Based on our outreach and surveys, we think actually being involved in activities is effective for improving awareness. Since fighting ocean acidification is part of fighting global warming, continued efforts to stop global warming and reduce reliance on fossil fuels are also important. In conclusion, we must continue to educate people about ocean problems.

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## Change Our Mind

2626: Kanazawa University Senior High School

Key words: global human resources, simulated international conference, starvation

### 1. Introduction

The second grade students of this school carry out a simulated international conference. We discuss how to save food in 2050. For the discussion, we visited some international organizations and companies. We learned about what Japan do in order to save food and reduce person who dies of hunger. Then, we wondered how our discussion can help to solve food shortage. Therefore, we had some organizations or companies evaluate our discussion.

### 2. Methods and Results

We asked some questions of seven organizations by e-mail. The questions are what think about the conference, how power we need to be global persons, and so on. We wrote their replies in the following sentence.

(①What do you think about the simulated international conference? ②How person can be a global person?)

Through interviews, what is the power you can master by a simulated international conference? What are the global human resources which society requests?

Simulated international conference: We can get knowledge about bargaining power, communication ability, research ability and international problems.

Global human resources: Someone who can understand and accept various cultures and the values, can work on international problems in independent way with high consciousness.

### 3. Conclusion

We can master many skills by a simulated international conference. These skills will be useful to play active parts as global human resources in the future. But it can't be said with problem consciousness, we can't solve international food problems. In our school, there are few students who work on a simulated international conference in independent way now. It's because many students have low level of person concerned consciousness and are all to others. How is it possible to change the consciousness?

Also, after we had learned approach to international problems, many leftovers were seen when we had lunch or dinner together. Through various SGH activities, we can have raised knowledge about food problems and the ability to solve them, but we can't have changed our life styles. How is it possible to change these things?

We thought that experiencing the current situation of the developing countries leads to having problem consciousness by an individual and usual life and action. So we discussed what to do. First, there was an idea which we go to a developing country by a school trip.

But, we gave up this because it cost too much and is difficult to protect the safety of students. The idea we thought and took out is a hunger experience. We can experience a meal of the same condition as the people who suffer from hunger. Also, we can feel it familiar to us.

In our school, we conducted a QUINOA dish experience for three days.

Feeling of fullness is becoming bad day by day. We send a questionnaire to students before this experience and after that to know about change in recognition to eating habits and hunger.

## Chihayafuru Action

Overseas aid ,Medical care ,Welfare

2627:Fukui Prefectural Koshi High School

Key word:Chihayafuru,Chihayafuru week,Onigiri Action

### 1. Introduction

We construct the hypothesis that we can do overseas support with chihayafuru from Fukui. Our sub theme is medical and overseas support. So we thought that something to do with Fukui can help provide medical equipment and vaccines for areas of medical shortage in the world. Also we thought it is good that many young people join overseas support. Chihayafuru takes place in Awara city in Fukui a events about Chihayafuru are held there every year. So we thought that it would be good if anyone could do overseas support using Chihayafuru which is popular among young people.

### 2. Methods and Result

We conducted a questionnaire survey in Japan,Thailand and Vietnam. To see how many people are using SNS, we found about85% of people used it. I examined if people would like to Participate in a Chihayafuru event if one was held in Fukui. Those who answered Yes→Japan:18% Thailand:42% Vietnam:31% What is Onigiri Action. Post rice ball picture to SNS→ Companies that sponsor will donate 100 yen per photo.

### 3.Conclusion

Tnetwork services on their smartphone and charity events such as Onigiri Action are being done now using SNS. But many believe that Fukui is too far from the city center. So It is difficult to go to Fukui for events. From this we decided to support overseas with a project called Chihayafuru Action that combines Chihayafuru and Onigiri Action. A committee for Chihayafuru Action will be based in Fukui but there will be events all over Japan. By doing this project, many young people who do not actively raise money can easily join overseas support.And through the project they will be interested in a social problem.

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## Small Hydroelectric Power Generation

2 6 2 8 Kofu-daiichi high school

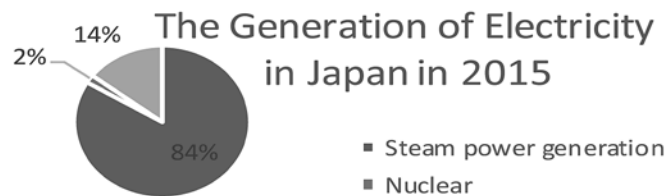
Japan has a problem of being dependent on steam-power generation with finite fossil fuels. To solve the problem, we think that we should develop and popularize Small Hydroelectric Power Generation which is stable compared to other renewable energy. As a means to solve it, we will actually make Small Hydroelectrical Power Generator. And we aim to progress its awareness through mainly children. But, we have problems such as strength and right of water yet. So we will keep improving and organize a better plan.

### 1. Introduction

We focused on the problem of energy, especially that Japan is heavily dependent on thermal power generation that uses fossil fuel. We wanted to disperse an alternative energy for thermal power generation with "small hydroelectric power generation". There are two reasons. First, this is stable compared to other renewable energy. Second, Yamanashi's geography is suitable for this power generation because Yamanashi has many water sources. That is why we made this plan.

### 2. Methods and Results

The biggest purpose of our plan is to disperse small hydroelectric power generators that harness Yamanashi's geography. As one route, we actually made small hydroelectrical generators and check whether or not it can generate and spread around our activities word of mouth. Finally, we want to make a lot of chances for people to be aware of the "small hydroelectric power generation".



### 3. Conclusion

The biggest purpose of our plan is to disperse small hydroelectric power generators that harness Yamanashi's geography. As one route, we actually made small hydroelectrical generators and check whether or not it can generate and spread around our activities word of mouth. Finally, we want to make a lot of chances for people to be aware of the "small hydroelectric power generation".

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- ① measure the public's changing awareness of hydroelectric power.
- ② Acquire the right to use public water.
- ③ Improve the strength and efficiency of the hydroelectric generator.

### Awards

Prize: Leave a Nest Co., Ltd. Marine challenge program 2018 Kanto meet, performance award.

## How can International Students find proper jobs in Nagano? Win-win relationships in the local community

2629: Nagano High School

Keywords: International students, Studying abroad, Job hunting, Mismatch, Nagano, Partners

### 1. Introduction

First of all, we are all interested in studying abroad, but we have many fears. So we decided to research the life of international students in Nagano. We thought that it would be helpful for us when we study abroad.

So we visited the Shinshu University Faculty of Engineering and interviewed some international students. They said it is difficult to make Japanese friends, understand some Japanese cultures and the biggest problem was that the Japanese language is hard. Also, through the interviews, we discovered something new. Before that, we had only paid attention to their school life however we heard that their lack of Japanese comprehension influences their job hunting in Japan. As a result, we started to focus on the ability of international students in Nagano to find their jobs.

### 2. Methods and Results

We researched the job hunting of international students individually. Although 64% of the exchange students wanted to find employment in Japan, only 34% of them actually found one in 2016. (東洋経済オンライン. 2018) This is the serious present situation of international students' job hunting in Japan.

We also went to the International Division of the Nagano Prefectural Office to learn more about the problems of job hunting for international students in Nagano. There, we found that a mismatch often occurred between companies that want simple labor and high skilled foreign personnel such as international students.

International students want to work at well-known large companies, but most companies in Nagano are small or middle companies. Also, the small or middle companies don't know how to make use of the advantage of the international students. (International Division of the Nagano Prefectural Office). The company cannot grasp the international students' actual abilities clearly. The international students don't know how they can make the most of their ability.

### 3. Conclusion

We suggest 2 ways.

First, a Japanese student will become a partner of an international student. If the international student has any trouble with Japanese culture or Japanese language, they can feel free to ask the Japanese partner anytime. It will help them make Japanese friends and improve their Japanese language skills. Also, the Japanese partner can learn about the international student's home country and can discover new perspectives of Nagano or Japan from the interactions with them.

Second, we want to do a project which can help international students more closely and supports them find a job that can put their abilities to use.

Not only the adults, but also the high school students like us can be the members of this project team and search for ways and ideas with international students together, and as a result, we can also get an opportunity to have a view of job hunting and contribute to our local community through this project. Currently, there is no practical solution for the situation, so we want to propose a project like this to make use of the abilities of international students in Nagano. Rather than thinking of a solution to solve all international students' problems of job hunting at once, we believe we should create a society that closely follows the thoughts of each and take full advantage of the abilities of international students.

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2017

年

度

人手不足なのに「外国人留学生」は就職難だ(東洋経済オンラインより)

<http://news.livedoor.com/article/detail/15169567/> 2018年8月17日

長野県庁国際課より

## Economic Development of Cambodia

### Comparison between the primary education of Cambodia and Japan

2630: Ogaki Kita Senior High School

Key words: Economic disparity, Gross domestic product, Teacher training

#### 1. Introduction

We visited Cambodia for on overseas training last year. We learned that in Cambodia the commodity price is cheap and main industry is agriculture. We found out that there is economic disparity between Cambodia and Japan. This year, we want to suggest solutions to minimize the economic disparity between Cambodia and Japan, and to develop the economy of Cambodia.

#### 2. Methods and Results

We made a hypotheses and three research questions based on the problem as above got from the overseas training and from an essay entitled, “*Effect of Education On Economic Disparity*” by Maruyama Fumihito. The three research questions are 1. What is the economic disparity between Cambodia and Japan? 2. Why does the economic disparity occur? 3. How do we minimize the economic disparity? Furthermore, we proved that the difference in the Gross domestic product between Cambodia and Japan depends on “*IMF – World Economic Outlook Databases*”. We discovered that the cause of the decline in education is the poor quality of teachers in Cambodia. Finally, we suggested that the best solution to improve the economic disparity is education.

There is a huge difference between Japan’s 4.873 trillion dollar nominal GDP and Cambodia’s 22billion dollar nominal GDP. The cause for this is wage and the differences in industry and education. When we visited Cambodia for on the overseas training last year, we found out that they lack facilities, teachers and education curriculums. As a result, we researched about teacher training schools, the educations curriculum and the salary of teachers. We found out that even the students of 80% who got lower grades in the graduation exam can still enter a teacher training school. Moreover, the education curriculum is not fully understood. In addition, the salaries of teachers are insufficient.

#### 3. Conclusion

The purpose of this study research is to improve the economic disparity between Cambodia and Japan by solving the problem of education in Cambodia. In the research process of three research questions, we researched about teacher training schools, the educations curriculum and the salary of teachers.

Based on the research of our investigation, we suggest three solutions. First is to raise the passing score in the teacher training school. Second is to raise the level of the entrance examinations in the teacher training school. Third is to tell the educational curriculum in teacher training schools. By implementing these solutions, the economic disparity between Cambodia and Japan will be improved.

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## Why Don't You Reduce Virtual Water?

2631: Shizuoka Prefectural Mishima-Kita SHS

Key words: Virtual Water, Awareness, Application

### 1. Introduction

As we Japanese feel that we have plenty of water resources in our country, we don't notice we are helped by invisible water when we trade. This invisible water is called virtual water (VW). Water in the world is getting scarce because of rapid population growth and climate change, and in the future we are in the water crisis if we continue to use as much VW as now. We should do taken an action for the risk of world water shortage, so we suggest some ideas to help people raise awareness of the situation.

### 2. Methods and Results

From our research on documents, we understand that Japan uses the largest amount of VW in the world. That is because Japan's food self-sufficiency rate is as low as 40% and it relies on imported food to feed its people. So we aim to design some actions which make people become aware of their actual water consumption. People know that it is important to save water, but they tend to think that it is nothing to do with them. Then, we hit some ideas from the view of *JK* (girl high school students, *joshi kousei*).

- We created videos for VW education, then we would upload them to Twitter and Youtube.
- We designed a basic concept of an application that can easily measure the amount of VW in daily meals even for high school students like us.
- In Singapore, when we gave a presentation to Dr. Cecilia Tortajada, who is Senior Research Fellow for the Institute of Water Policy, Lee Kuan Yew School of Public Policy, Singapore, she was full of praise for our idea. She pointed out that our app was sophisticated enough to be commercial reality, and everyone could use it, and that the app for food VW would be applied for VW of clothes.

### 3. Conclusion

When we are conscious of how much VW we use, we will not waste VW from all over the world. One of the possible reactions would be eating less meat to reduce the amount of VW. Moreover, by changing people's diet, food self-sufficiency rate would rise. Japanese people need to reduce VW to preserve the world water all the more because world population is highly expected to increase. To realize the app, we need to get access technology and those who can help us. Also, we need to pursue more efficient ways to spread information.

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# Analysis on the tax improvements imperative to solving Japan's ageing population issues

2632: Aichi Prefectural Asahigaoka High School

Key words: ageing population total fertility rate tax improvisation

## 1. Introduction

Ageing population has been a growing problem for the past decade or so, around the globe, and especially in Japan. The seemingly forever declining working population and the conversely skyrocketing social welfare fees have encouraged Japan's national debt to cross the unprecedented milestone of a quadrillion yen. We need to act immediately if we are to prevent a financial catastrophe. Though the Japanese government have put into effect various policies, Japan's Total Fertility Rate(TFR) is still at a mere 1.45. Thus we decided to contemplate this issue ourselves and originate policies that would not only raise the TFR, but concurrently ease our national debts, all while providing care for senior citizens too. Since tax improvisations are imperative to such new policies, we have also come up with what we believe to be the optimal improvisation, analyzed its effects and the burden citizens would have to face through such a change, hopefully determining the probability of realizing these policies.

## 2. Methods & Results

Firstly, we propose the following 7 policies(for which we have detailed analysis and reasoning on, but regrettably will have to cut such information in this simplification of our presentation for it is not the main focus here),

(1)New child benefits (2) Further government assistance with infertility treatment (3) Reconsidering our current nursery systems (4) A change in the medical care system for our senior citizens (5) Helping young men/women get regularly employed (6) Improvising the pension system (7) Improvising maternity leave.

Secondly, we propose to improvise our taxes in the following 3 ways in order to realize the policies above,

(1) Lower income taxes by 20% for people earning less than 8000000yen (2) Raise consumption taxes to 15% with the exception of food and medical supplies (3) Introducing reduced consumption tax rates of 3% for food and medicine.

Only 12% of the population earns more than 8000000yen annually but accounts for over 50% of the tax revenue from income taxes. Thus by lowering the income taxes for people who make less than 8000000yen an year, we have enabled 88.0% of the population to gain more money, while not losing much revenue. Next, we have raised consumption taxes to increase tax revenue. But this alone would lead to a decline in the living standards of people with low incomes, so we employed a reduced tax rate system covering food and medical supplies. Tax revenue will increase 7.11trillion yen through these improvisations.

Furthermore we have conducted a simulation in order to calculate the financial burden a citizen would face. Taking the perspectives of 3 income(annual) ranks , 2500000yen(low), 4600000yen(medium), 20000000yen(high), this simulation takes into account income taxes, residence taxes, social welfare fees, Engel's coefficient, and more. This revealed that with these tax improvisations, even though tax revenue increased, the financial burden of a low/medium income person would decrease.

## 3. Conclusion

For the reasons stated above, we believe that as a means to effectuate our 7 policies, the tax improvements we propose are not only highly probable but would require minimal sacrifice from citizens, and could actually save Japan from the crisis it is facing. Furthermore we hope that this research will help other nations in engaging similar issues.

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## “Education of Sexual Diversity” into Compulsory Education

2633: Meijo University Senior High School

Key words: LGBT, Sexual minority, Sexual diversity, Education

### 1. Introduction

It is said that the ratio of sexual minorities is 7.6% in Japan, that percentage is 1 in 13 people. However, in Japan, understanding about sexual minorities has not progressed, and there are many sexual minorities who have experienced bullying and discrimination. The problem is the “lack of knowledge” and not being understood. Therefore, I thought that it is necessary to have the opportunities to acquire knowledge about “diversity of sexualities” at the elementary and junior high school level. I considered how to incorporate “sexual diversity” into the school curriculum.

### 2. Methods and Results

I analyzed survey of “teacher training” in Japan and “university syllabus” in Aichi. In addition, I investigated textbooks of health and physical education and home economics for elementary and junior high schools.

From data analysis “survey of teacher trainings” and “survey of universities syllabus”, there are few courses about sexual minorities. Moreover, these courses offer limited knowledge of sexual minorities. From data analysis “investigation of contents of description in textbooks”, expression limited to heterosexual like “We reach puberty, boys love girls and girls love boys” and there are some illustrations which symbolized heterosexuality.

### 3. Conclusion

From these surveys, at first, seminars of “sexual diversity” for teachers and trainees should be increased, and introduction of basic knowledge. Moreover, there should also be seminars provided for students. Regarding textbooks, we need to revise their descriptions and add topics about sexual minorities. Finally, I suggest we establish opportunities to learn about “sexual diversity” in home economics, health and physical education, and moral education.

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### Awards

# Collecting Second-Hand Books Can Abolish Child Soldiers: The First Step to a World without War

2634: Mie Prefectural Yokkaichi High School

Key words: child soldiers /

## 1. Introduction

On May 16<sup>th</sup>, 2018, all of the students at our school took part in a lecture by Mr. Masaya Onimaru, the founder of Terra Renaissance, an authorized NPO in Japan. He discussed how he met many children that were forced into wars in Africa. We learned that there were at least 250,000 child soldiers all over the world.

We were shocked to know that a lot of children were kidnapped and forced to be soldiers. It might be difficult for us living in Japan to solve this problem, but we realized that we could find some ways to abolish child soldiers and contribute to world peace.

## 2. Methods and Results

Terra Renaissance offers a program that promotes the collection of second-hand books to save children in need all over the world. The student council at our school and other students worked together at our school festival, which was held from August 29<sup>th</sup> to August 31<sup>st</sup>. We asked all the students to bring books from home to donate at school. Together, the students were able to collect 186 books for the program. Many students remembered Mr. Onimaru's lecture well and thought they had to do something to help contribute to world peace.

## 3. Conclusion

Collecting 186 books might be a small contribution to solving the problem of child soldiers, but we felt we were able to make the first step towards a world without war. It is essential for us to make a sustainable society. We have to eliminate the fear of wars in order to make the world sustainable.

Mr. Onimaru left us a message; "Someone that only you can save will be waiting for you." We must not forget that we are global citizens. We are involved in everything happening in the world, and we have to think of people and take action from a global point of view.

The representative students of our school are going to Cambodia at the end of December. They are planning to listen to local people talk about the elimination of landmines that still remain in the country after the Vietnam War. We will share the survey results that they will bring back from the country, and continue studying ways we can contribute to world peace. We have come to the conclusion that donation is one effective way to abolish war.

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## Awards

N/A

## Is it true that you can protect Lake Biwa just by eating? -Approaching the truth of eco-friendly agricultural products-

2635: Shiga Prefectural Moriyama Junior and Senior High school

Key words: environment, agriculture, sustainable

### 1. Introduction

In Shiga prefecture, there is a unique agriculture, forestry and fishery product certification system called “environmentally committed agricultural product certification.” Agricultural products produced under this certification have been produced using technology that reduces the amount of pesticide and chemical fertilizer to less than 50% of the usual amounts, prevents the outflow of contaminated water, and has the merit of being environmentally friendly to environments such as Lake Biwa. However, the awareness is still low, and there are many farmers who stop cultivation because they cannot reap adequate benefits from their time and efforts. So, we concluded that there may be a problem in the system for environmentally committed agricultural products, and aimed to popularize sustainable agriculture, while considering the environment by clarifying the problems.

### 2. Methods

We researched about awareness and viewpoints of consumers, producers and administrators regarding “Environmentally committed agricultural products.” In order to clarify the problems regarding environmentally committed agricultural products, we conducted questionnaire surveys on the environmentally committed agricultural products directed towards producers and the Food Brand Promotion Division of the Shiga Prefectural Agricultural and Fisheries Department. Also, in order to research the value of “Environmentally committed agricultural products” for consumers, we sold two kinds of rice balls at the same time; one made from rice grain (*Mizukagami*), certified as an environmentally committed agricultural product and the other made from a standard rice grain (*Koshihikari*). Both rice grains were produced in Shiga. We compared the number of rice balls we sold. Also, when we sold them, we conducted questionnaire surveys on the environmentally committed agricultural products.

### Future prospects

In order to make the eco-friendly agricultural products system more effective, we aim to think about improvement measures based on the findings of this research, and propose suggestions to Shiga prefecture in order to try to improve the system.

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## From Cultural Heritage To Cultural Treasure-The Tale of Genji Crossing the Border-

SGH Number 2636: Kyoto Prefectural Sagano Senior High School

Key words: stamp rally, The Tale of Genji, Kyoto, culture

### 1. Introduction

We learned about the Tale of Genji through a stamp rally activity we created called, “The culture of the Heian period in Kyoto”. We found many points of complex human relationships common between the past and present. The Tale of Genji is a book written in the Heian period and is considered the first in the long list of Japanese literature written since then. We discussed what we could do to tell more people in the world about this great masterpiece and have them appreciate it. We decided to hold a stamp rally where people from different generations and nationalities could enjoy the novel. We also wanted to raise the overall low interest level of people in Japan and invite everyone into the world of the story.

### 2. Methods and Results

We planned the stamp rally around the Koten no hi, “Classics Day”, in November 2018. This day is celebrated in Japan to publicly honor Japanese classical literature. For our stamp rally, we asked some temples and shrines in Kyoto city if they could be the checkpoints.

We put 11 checkpoints at various temples and shrines, such as Kiyomizu temple and Shimogamo shrine. We received support from the official promotion committee for the Koten no hi and our custom stamps were sponsored by the Shachihata Corporation. We also asked local companies in Kyoto, such as the Shimadzu Corporation and the Horiba Corporation, to make a monetary donation for us to create a plastic folder as a prize for participants that finished the stamp rally.

The Kyoto city transportation bureau and the Kyoto bus corporation approved our request to advertise our stamp rally on city buses and at stations. We actually held our stamp rally on October 27th, 28th, and November 1st, 3rd, and 4th of this year. The total number of people who took part in the stamp rally was approximately 20,000, and the number of people who completed the rally was about 500. Three collected stamps were necessary to receive the plastic folder. We also asked the participants who finished to answer an online questionnaire about the stamp rally.

### 3. Conclusion

We were able to see that a lot of families including children took part in this stamp rally and enjoyed it. The reason for this could have been the cute illustrations drawn by Midori Nagata. In addition, we could provide participants with a fun opportunity to learn about The Tale of Genji. The shrines and temples we had as checkpoints informed us that the number of visitors increased and they benefited from the increased traffic.

From the results of our questionnaire, we found many problems that we did not expect when we carried out this stamp rally. This research project was passed down to us from our seniors, and since we did not know what to expect, we only prepared signage written in Japanese. However during the stamp rally, many more foreign people were interested in it than we had expected. Although they showed interest in the stamps, they did not participate, so we will try to make signage written in other languages in the future.

Also, we found a problem in regards to accessibility for participants. First, we thought it was difficult for children and the elderly to work on the questionnaire by using the QR code. Second, the words on our signs were too small and contained too many difficult kanji and small kana for children. Next time, we want to create two more different types of signage, one aimed at children with simple Japanese and a multilingual version for participants from outside of Japan. Also, participants had gathered from all over the country. We realized we should have had city maps to help people navigate around the city. We received a lot of helpful comments and we were able to take the first step to spread the joy of the Tale of Genji all over the world.

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読む』 Asahi Sensho, 2014, 「源氏物語の時代- 一条天皇と后たちのものがたり」 Asahi Shinbun 2007

# The Development of Cycling and Bike Share Systems in Kyoto City with Reference to Vélib' in Paris

2637: Kyoto Municipal Horikawa Senior High School

Key words: bike share system, transportation, Kyoto City, Vélib'

## 1. Introduction

Bicycles are currently attracting a great deal of attention as a way to complement the next generation of urban transport. By using bicycles, we can reduce the amount of CO<sub>2</sub> in the atmosphere. In addition, as the 2020 Tokyo Olympic Games draws closer, traffic congestion has become a big concern in Kyoto City. Alternative means of transportation has become necessary. However, due to the lack of bicycle parking and the awareness of such spaces in Kyoto City, bicycles are considered to be underutilized. I researched on how to encourage the use of bicycles in Kyoto City.

## 2. Methods and Results

I researched about bike share systems which are being used in other countries in order to develop cycling in Kyoto City with consideration of the Vélib' bike share system in Paris, France. I found that there are three advantages to a bike share system: it would provide another form of transportation, it would decrease the number of illegally parked bicycles, and it would encourage the use of bicycles. In addition, I attempted to solve some of the problems of utilizing a bike share system in Kyoto City such as the location of bicycle stations or the unstableness of the number of bicycles at the stations.

## 3. Conclusion

I concluded that introducing such a system would be beneficial to Kyoto City. Such a system would be useful for both local people and tourists.

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3. Les stations bonus, de la plus fréquentée à la plus ardue! (<http://blog.velib-metropole.fr/blog/2012/03/19/les-stations-bonus-de-la-plus-frequentee-a-la-plus-ardue/>)

# An Uji-Laos educational collaboration for innovation and social contribution

2638: RIitsumeikan Uji High School

Key words: innovation, contribution, charity, High School Social Responsibility Summit

## 1. Introduction

Our research theme was to help students to solve matters with social contributions and innovations in mind. One of the activities was a collaboration for educational support in developing countries and stimulation of trade in Uji city. Wakka, a charity organization, attended our events in Uji and hosted charity events involving the students abroad. We have made ways to sell coffee from Laos in an Uji coffee shop. This year, FOCUS, a summit of high school students to discuss social responsibility, was held at APU. 53 students from eleven schools gathered to collaborate on ideas from each school.

## 2. Methods and Results

Students do their projects in each group to revitalize the community after fieldwork, research, and surveys to find out about problems which their community, Uji city, has faced. One of their projects is holding a candle night in winter to liven up the community finding out about the issue that there are too few events at night in winter in Uji.

In order to support people's independence and get a stable income in Laos, students visit farmers and buy their products coffee beans in Laos. The beans are sold to shops in Uji and also sold at charity events. This project has been conducted for four years and more shops which sell the coffee beans should be found as a next step.

As to educational support in developing countries, students set up a 'Wakka project', which students studying for one year overseas have held charity events in each country, Australia, New Zealand, and Canada, to raise money. Now 10 students in total in Laos, Thai, and Cambodia are able to go to school from the money donated.

In this summer, High School Social Responsibility Summit named "Focus" was held to share ideas and problems with students in other schools to improve and brush up their own projects. 11 schools, 9 companies, and 20 international students at APU gathered for the summit. This coming January, "After Focus" will be held to share how the project will continue after this summer.

## 3. Conclusion

The good point of this research is that all the projects revitalize the community, support independence, and raise money for educational support in developing countries have not been completed yet, but have continued making improvement with trial and error and are continued by the next students.

# An Education Based Approach to Improving Gender Equality

2639 Ritsumeikan High School

Key words: LGBT, Train the Trainers

## 1. Introduction

These days, the term “LGBT” is becoming more well-known, but it is just the level of familiarity that is rising. This means a harsh reality still exists for minorities because of majorities. To change the situation, I focus on education. In general, young generations make a big influence on society. Before we can increase the recognition among younger generations we first need to increase the teachers who teach the young generations about gender. I’m trying to find the way to test recognition in my school.

## 2. Methods and Results

The aim of this research is to create a “train the trainer” system to establish lessons about gender at school. I used three kinds of methods to make the system. First, I conducted a questionnaire investigation of my teachers to establish their knowledge about gender, their experience with gender issues and their opinions about questions related to gender. From this survey, I could understand what kind of knowledge or lessons they need to provide about gender to their students. Another way is providing a brief workshop to the teachers to raise their level of familiarity with gender issues based on the survey.

Also based on a survey conducted by Williams Institute UCLA School of Law, the world acceptance of LGBT is increasing, but there is still a big gulf between high acceptance countries and low acceptance countries. The last method is to try and find the reason for this difference from an educational viewpoint. From my research, most young generations in the high acceptance countries have high degree of interest in LGBT issues. In their countries, cultural basis is able to accept minority easier than others. By comparing with other countries, the fact that the characters of majorities are different came up.

## 3. Conclusion

As a future plan, I will make the educational kits about gender to provide to the teachers so they can become able to give lessons about gender to students. My ideal plan is to spread the educational kits about gender not only at my high school but also to other schools, such as primary schools and junior high schools.

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# What can we do to stop ourselves sleeping in class?~what we learned from an inhaler in Thailand, Yadom~

2640: Osaka Prefectural Kitano Senior High School

Key Words: Yadom, Sleeping in class, Photo Contest

## 1. Introduction

Many students in Kitano High School tend to feel sleepy in class. We looked for something good to keep us awake and by chance found a popular inhaler in Thailand, Yadom. It is useful because we can use it in class, it is cheap and it has no bad effect on our health.

## 2. Methods and Results

First, we asked some classmates, “Do you feel sleepy in class?” The result shows that almost all of them tend to feel sleepy in class. We regarded this as a problem and considered what the solution is. We researched and by chance found a popular inhaler in Thailand, Yadom. It is very useful because we can use it in class, it is cheap and it has no bad effect on our health. Then we carried out an experiment to find out whether it is really effective. The result shows that more than half of the students stayed awake by using Yadom, so we can say that Yadom is really effective for high school students. Next we considered how to make Yadom more popular in our school. As you know, most high school students use smartphones and SNS sites, so we decided to use them. We researched “Which SNS sites do you use?” The result shows that many students use Twitter and Instagram. These two specialize in photos, so we suggest carrying out a photo contest. We will talk about the details of the photo contest. Through the photo contest, we hope that students will come to feel close to Yadom and Thailand.

## 3. Conclusion

We suggest using Yadom; a popular inhaler in Thailand, to keep us awake in class. Also we suggest carrying out a photo contest to make it more popular.

## 4. References

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## Social Business Plan: AGEDNSEE

### ~ Connecting Senior Citizens to Suitable Jobs ~

2461: Osaka Prefectural Mikunigaoka Senior High School

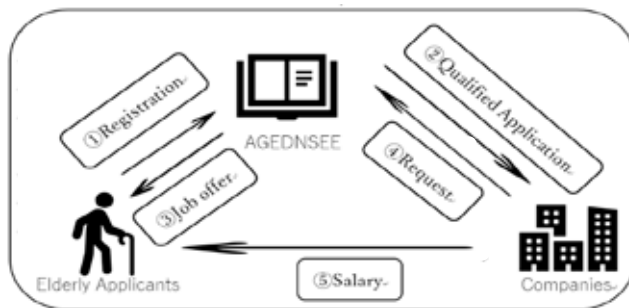
Key words: Aging society, Senior citizens, Suitable jobs, Short-term private recruitment

### 1. Introduction

The Japanese economy is said to decline year by year partly due to the shrinking workforce. We want to contribute to solving it by proposing a business plan for efficient hiring of elderly workers. We particularly focused on elderly applicants because Japan has a significant population of senior citizens, and that is likewise an object of public concern as well as other countries with large aging population.

Our company name is AGEDNSEE. It was named after “AGED”, “SEE”, and “AGENT”. AGEDNSEE is a temporary company which helps to provide short-term private recruitment. The ‘short-term private recruitment’ means companies recruiting under special cases because they have no time to select new employees and it is difficult for them to find people who have certain specialized job skills.

### 2. Methods and Results



① When elderly applicants register with AGEDNSEE, we collect personal/academic background information and their medical certificates.

② After reviewing their applications, we choose qualified applications depending on the companies hiring need and job requirements.

③ As soon as companies request AGEDNSEE to recruit skilled or experienced people, we select and recommend people who meet the hiring needs. We collect questionnaires on whether you continue to register and quality of this service. It also serves as safety confirmation.

④ The companies that signed a contract with AGEDNSEE are allowing AGEDNSEE to find a suitable person. In addition, the companies decide the terms of employment. (contractual or full-time, salary, benefits, etc.)

⑤ The companies pay the salaries to elderly applicants, so AGEDNSEE does not receive any percentage of their salaries.

### 3. Conclusion

We conceptualized a job-placement agency, that can revolutionize hiring of elderly applicants if this business succeeds. An advantage of this business is to offer the most suitable form of work to elderly applicants, depending on their educational background and related work experiences. Therefore, elderly people will be empowered to work and likewise, companies can utilize and involve them in the workforce leading to increase in the number of senior citizen workers. Now is the time for all generations to cooperate for a brighter future of Japan. Why don't we all believe the wisdom and the experience that elderly people have?

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Statistical Handbook of Japan, JILPT, Webpages of © PERSOL CAREER CO., LTD. and (c) Recruit Holdings Co., Ltd.

# Method for Preventing Damage of Field Crops from Wild Animals

2642: Kansai University Senior High School

Key words: wild animals, damage, field crop, a policy of expanding of forestation

## 1. Introduction

In recent years, urbanization in Japan is continuing to increase, and we feel that people are losing interest in nature. In this situation, we are interested in the story of farmers that are in trouble because of crop damage caused by wild animals. If it gets worse, there is a possibility of food scarcity.

Therefore, we want to offer measures to keep a stressless distance between people and wild animals. Also, we want to increase people's awareness of the problem by discussing it.

## 2. Methods and Results

First, we researched what the Japanese government has done for forest conservation by using the internet and books. The government enforced a policy of expanding forestation in the late 1950s to 1960s, but the demand for wood was not high and accordingly, a large quantity of conifer forests were left.

Second, we visited a man working at a forestry organization to ask about preventing damage of field crops by wild animals. He advised us that it may be related to changes in human lifestyle.

Based on our research, we found that many people have migrated from rural areas to urban areas in order to get jobs during a period of high economic growth. In fact, in the present age, the amount of the total population of Japan located in three major cities has increased from 34.0% to 46.1%.

Then, we learned about how to convey information to the public by visiting KIKU TV in Hawaii. They said it is most important to decide who to tell the information to.

## 3. Conclusion

First, we should increase food for wild animals. For example, by planting broad leaved trees which bear fruits for wild animals. When we plant them, we need to consider the territory of wild animals, and to plant areas wisely.

Also, wild animals have high learning ability, so we can try to keep them away from farms by establishing corral traps or electric fences of different kinds in rotation on a regular basis.

It is very difficult to keep wild animals that have found a place to get food easily away from the fields. We have to take measures patiently until each species lasts for generations. From now on, we want to spread these facts to many people and enhance awareness.

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## Coffee Reuse Project!! -Eliminate the Bad Smells-

2643: Himeji Nishi Senior High School

Key words: reuse; deodorization; coffee

### 1. Introduction

Bad and unwanted odors is a big problem in human lives. For example, in Malaysia, many local people are suffered from the odors that come from nearby garbage dumps. Even in Japan, there is a lot of pollution, such as smoke from factories, that produce bad odors. We took this problem seriously, and started searching for solutions to this problem. We found coffee grounds had a deodorization effects. So, we decided to focus on researching coffee grounds and how to effectively use them to deal with the odor problems since coffee is drank around the world and most coffee grounds are thrown away.

### 2. Methods and Results

The first experiment we did examine the deodorant effect of coffee grounds by using ammonia which is the cause of many bad smells. We carried out some experiments to find out the effects of coffee grounds and the most effective way to use its deodorizing effect. We put coffee grounds, ammonia, and litmus paper which shows alkalinity into tightly sealed containers, and observed them. If the litmus paper changed color, it will show that coffee grounds absorbed the ammonia. Then, we changed the water content of grounds and tested again. We found that dried grounds had the most effective deodorizing effect.

Second, we put coffee grounds and ammonia into tightly sealed containers and measured alkalinity concentration by using a detector tube. From this experiment, we could get a numerically result.

### 3. Conclusion

The results of these experiments show that coffee grounds have a deodorization effect and there are several ways for the coffee grounds to work effectively. We have just started searching ways to make use of this effect in our everyday life. We will focus on *washi*, traditional Japanese paper, as one ways to utilize coffee's deodorizing effect. We are making *washi* which contains coffee grounds and going to investigate if it has the same deodorization effect. If we can prove that the *washi* paper with coffee grounds works well, we can make use it as a deodorizer in kitchens, toilets, entrance, and other places bad odors may occur.

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- Homepage of Asahi Shimbun Company
- Homepage of GASTEC How to use gas detector tube

## Mental care for long-term hospitalized children

### How can children receiving long-term medical care be helped to be more active?

2644 Kobe Municipal Fukiai High School

Key words: Mental care, Child Life Specialist (CLS), Long-term hospitalized children, Independent medical care

#### 1. Introduction

Currently, according to the Ministry of Health, there are about 30,000 children hospitalized in Japan. When their daily life changes so suddenly for a long period of time, they often become confused. The current medical environment doesn't allow children to live freely like other healthy children. Thus, they are always in a passive position in medical situations, so the research question is "How can children receiving long-term medical care be helped to be more active?"

The final goal of this research is to certify CLS as an international qualification and encourage international child medical care teamwork like in refugee camps and Medecins Sans Frontiers. Before we progress to this, at first, we have to enrich the systems in each country. Therefore, firstly I want to improve Japan's medical environment.

#### 2. Methods and Results

Research was obtained using online resources, books, and a questionnaire for Fukiai high school international course students, and fieldwork. In the fieldwork, I visited Osaka University Hospital and conducted an interview with a Child Life Specialist (CLS). In addition, I worked as a volunteer to support the CLS as part of the fieldwork.

To begin with, 80% of children have the biggest barrier: restrictions of visiting time. To help reduce separation anxiety from their mother, the occupations called Child Life Specialist (CLS) in the United States and Hospital Play Specialist (HPS) in England were established. CLS become a national qualification in Canada and Hong Kong too. Now, 90% of children's wards in England and America are hiring these workers. However, it's impossible to train human resources and take the CLS qualification in Japan. In addition, informed assent is a new way of thinking that requires getting approval from both parents and children. By operating with informed assent, we can shift from passive to independent medical care.

#### 3. Conclusion

I have three suggestions. First, human resource development in Japan. We need to establish national qualifications and establish a school that has child life departments or courses. Also, children need to get informed assent from those professionals. Second, in the United States most hospitals have a room for teenagers. Establishing a place for developmental growth and forming self-identity is very important. From this, I suggest making exclusive room for teenagers. The third recommendation is one we can attempt even if we are high school students. I suggest corresponding with hospitalized children using things like email or letters and CLS can meditate the communication with them to support their mental health.

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## **Practice type problem-solving oriented program by online communication conference calls between Japan and Indonesia**

SGH Number : 2645

Name of school : Kwansei Gakuin Senior High School

Key words : Project Based Learning, online discussion based problem solving, group working

### **Introduction:**

The problem-solving online session is a program where students from Japan and Indonesia discuss and solve both country's issues. This is done by video streaming once a week and interacting in real life problem-solving. The program allows students to, as a global team, formulate their own ideas and take in external viewpoints and solutions. This is a great opportunity to interact with people from different cultures, background and way of communication. During the school holiday's season, students can assist each other in active field work, discussions and presentations through an overseas exchange program.

### **Methods and Results:**

- I. Deepen understanding social problem by discussing with international students through video streaming every week.
- II. Preparing the problem-solving plan by discussing, researching and interviewing. Discuss what the cause is and what can we do now by researching and doing a questionnaire and interview. By doing students will be highly motivated and understand 'what we should do' before going abroad.
- III. Learn practical knowledge by visiting each other countries to find solutions for real-life problems.

### **Conclusion:**

The students definitely changed in only 3 months. By discussing and communicating with Indonesian teammates every week, the students developed confidence in listening and speaking in English since Indonesian students are always cheerful and respond in a favorable way. Not only did their English skill grow but also they became actively prepared for the next session without being forced to do so. They may also have been inspired by the way Indonesian students prepare for sessions in which they spend much time researching. Finally, the students could have a great confidence in taking action by actively committing to solve the social problem with facilitator's support (Interview, Do questionnaire, suggest their idea, promote a topic via poster, Instagram, LINE stamp and creating event). Therefore, at the final presentation, they can present clearly with eye contact, gestures and strong confidence by they have put effort to execute their ideas even if they failed after all.

### **References:**

### **Awards:**

# The way to develop tourist city, Nara

## With sister city

2646: Nara Prefectural Unebi High School

Key words: Sightseeing, cooperation, world heritage, repeat visitors

### 1. Introduction

“Kumanokodo” has success in developing sightseeing with “Routes of Santiago de Compostela”.

We propose that we advertise the charm and traditional world heritage sites which Nara is proud of. The goal is to increase the number of domestic and international repeat visitors by making new proposals that we, as high school students, can make, and to promote infrastructure development by increasing the number of signboards labeled in multiple languages.

### 2. Methods and Results

Tourists who have visited “Kumanokodo”, which is a part of world heritage “Sacred Sites and Pilgrimage Routes in the Kii Mountain Range”, has made stamp cards which are accepted by those who visit “Routes of Santiago de Compostela”, too. Thanks to this card, the number of repeat visitors is increasing in each country.

So, we interviewed a lecturer at a UNESCO world heritage class, and some heads of countries who participated in “The 9<sup>th</sup> East Asia Local and Regional Government Congress” held in Nara in November about what is necessary and what are the problems to increase the number of tourists mainly in the center of Nara City. Also, we learned a lot from our school trip in Singapore and Malaysia.

We summarized these facts and our ideas, and want to make an announcement about what the policy should be, what tourists truly expect, and how to improve the infrastructure as to the correspondence about symbols, smartphone, and so on.

### 3. Conclusion

Concretely, this is an effort to set up Gosyuin Books at sightseeing spots in sister cities and enable tourists to gather Gosyuin. Moreover, we work on the administrative authority, by improving the approach path and increasing the places where we can experience vicariously, do some shopping, and enjoy eating. This will have economic effects.

However, for that purpose, a large amount of funds are required, and it is necessary to analyze how much the cost effectiveness.

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## The Greatest Gift in the 21 century Save India by "Neem"

2647: Nishiyamoto High School

Key words: Fighting off mosquito infection spreading in India by Neem

### 1. Introduction

We visited India on a school trip last year. Before we went there, we viewed Ministry of Foreign Affairs of website and found a call for attention to mosquito-borne infections, such as Malaria, Dengue fever, and Chikungunya fever, especially the number of people infected by malaria in India is more than any other Asian nation.

So foreign tourists who do not use insects repellent in daily life are at the risk of being infected them. Discrimination against former low caste layer people is so serious that they cannot get any jobs. Considering these problems, we have decided to solve this poverty problems.

### 2. Methods and Results



↑ "NEEM" we are growing  
is named "Jhonny"

We discovered "Neem".

Neem is originated in India, and 200 kinds of insects including mosquitoes dislike a component of Neem.

We did an experiment to make sure the effects of it's component.

The way of experiment is to make extraction water by Neem leaves and to put on subjects, and then we compared the numbers bitten by mosquito when you put it on the subject's skin and did not. We did this experiment under the same weather, same time environment for two days. As a result, all of subjects had much less number of mosquito biting when putting on extraction water.

Therefore we found that Neem's insect repellent effect.

### 3. Conclusion

We have come up with an idea basic skin-care goods made from neem. What is basic skin-care goods is face lotions, milky lotion, and body creams. The reason why we pay attention to basic skin-care is that we think that an act of putting face lotions or latexes on can prevent forgetting to use mosquito repellent and being got mosquito bites by adding mosquito repellent.

Next, we have decided to do 'COMMUNITY TRADE' which deal with former low caste people in cultivating neem. Community trade is a business that propose sustainable business relationships to small bribes and organizations that need support, and carries out long-term support (such as employment and medical care). Based on this system, in exchange for having Neem cultivated by former discriminated bribes , arrange raw materials with fair dealings and provide them with stable jobs to assist them.

We name this project "I Neem U Project" and its products "Fortuneem". "Fortuneem" is first sold to foreign tourists, and after this business succeeds , the goal is to offer it at low price or people in India.

Also, we will request hotels in India to set "Fortuneem" as amenities to advertise it. We assume that hotel guests actually use "Fortuneem", realize the goodness of "Fortuneem", and buy "Fortuneem" at a shop.



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### Awards

Not Yet



## Title What can we teach technical interns?

2648: Izumo Senior High School

Key words: Technical interns, those who come to Japan for few a years in order to learn special skills.

### 1. Introduction

The Technical Intern Training Program (ITTP) is an international contribution program. Technical Interns acquire skill and knowledge about their field of specialization. We are interested in how foreign workers work in Japan, and we researched about this ITTP program. Consequently, we found there are many problems with in this program.

### 2. Methods and Results

As a result of our survey, we found that most technical interns come from Asian countries such as Vietnam and China. But they work in poor conditions in Japan. This is because many companies use technical interns for cheap labor return than training them as the program describes.

Now, the problems are as follows.

1. They work under severe conditions such as low wage or long working hours.
2. Some of them experience industrial accidents because they don't understand Japanese or understand the risks and dangers of physical labor.
3. The government doesn't supervise the companies abusing the ITTP program are not held accountancy adequately.

### 3. Conclusion

The ITTP is an international skills training program. Companies should be teaching foreign workers about skills and working technique while in Japan. However, it is companies who abuse the ITTP system give a bad impression of Japan to foreign workers. We think foreign workers will not understand that Japan is a good place to work until we can manage the system and instruct technical interns properly.

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### Awards

## The negative effects of plastic bags on the environment and possible solutions for a cleaner and more sustainable future

2649: Okayama Joto High School

Key words: plastic bags, environment, reusable, eco-friendly, sustainable

### 1. Introduction

According to research from the Ministry of Economy, Trade and Industry, 430,000 tons of plastic bags are used each year in Japan. This is equivalent to 70 billion large-size plastic bags by our own calculation. If we burned all of these plastic bags, the amount of CO<sub>2</sub> emitted could only be absorbed by 100 million cedar trees. It is clear that plastic bags are contributing towards global warming, and have a grave influence on the earth's ecosystem. Nowadays it is said that over 90% of seabirds on the earth have consumed plastics, and many sea turtles and whales have died due to accidentally swallowing plastic bags.

In October 2018, the Japanese government announced that they are soon going to ask shops to charge for plastic bags. However, if each of us does not realize the negative influence of plastic bags on our ecosystem, the situation will never change. We realized that we need to educate people, search for the ideal material for alternative bags, and change our awareness of this global issue. We planned a project, starting with our school environment, to familiarize students and teachers with reusable bags and encourage them to abandon the use of plastic bags.

### 2. Methods and Results

We carried out research, mainly on the Internet, in order to find the ideal eco-friendly material. Our research factored cost, durability, and sustainability. Through interviewing a professor at Okayama University, we reached the conclusion that the best material is cotton. Unlike nylons and polyesters, cotton uses no fossil fuels in its production, and it has the ability to maintain its shape and colour for a long time. In addition, we also used questionnaires to survey people's tastes in colour and size.

We used the following methods to appeal to our fellow students: a presentation, putting up posters for two weeks, distributing leaflets using the slogan "Adieu and Farewell to Plastic Bags," and spreading the idea using the school information board and website. We also set up a blog to explain the damage caused by plastic bags, and the benefits of eco-friendly bags. Before and after the presentation, we conducted student and teacher surveys, in which we saw a big change of attitude.

Finally, we designed an eco-friendly bag which we believe is ideal for high school students. We sold them to students while encouraging them not to receive plastic bags at shops.

### 3. Conclusion

Our products sold well. By bringing their own eco-friendly bags, many students are now saying "no, thank you" in shops. The dumping ground of our school used to be covered with plastic bags, but we rarely see them as students think it more eco-friendly and fashionable to use their own bags.

Although we are restricted within our school at the present, we will try to expand our efforts to our local society. It is our hope that this change in attitude can spread across the country and even globally. We believe that once people understand the benefits of abandoning plastic bags, our world will become a little more sustainable.

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### Awards

None

## Our activities to make a world without nuclear weapons

2650:Hiroshima Jogakuin Senior High School

Key words: Nuclear Weapons, Signatures, Hiroshima Archive, Monument Tour, Workbook, Visually Impaired, A.I.

### 1. Introduction

The use of any nuclear weapons would put the whole world in danger. As high school students living in Hiroshima, we've been working to make the world free from nuclear threat. Today, we'd like to show you our approach to this problem.

### 2. Methods and Results

We collect signatures for abolition of nuclear weapons on the street on a monthly basis and take them to the United Nations. We have attended the NPT review conference for the past 6 years. There we joined the Youth Forum sponsored by the Mayors for Peace. 549,145 signatures have been collected over the past ten years.

We guide visitors around Peace Memorial Park and tell them the stories behind each monument. This is a good experience for us to gain knowledge and to help us shape our ideas about peace and nuclear abolition.

To hand down experience of bomb survivors, we interview and upload the stories to the Hiroshima Archive with the help of Dr. Hidenori Watanabe, professor at The University of Tokyo. By listening to their actual voice, people feel close to survivors and realize the impact of the atomic bomb. There is space for people to leave comments. We made a workbook for the Hiroshima Archive App to help people experience Inquiry-Based Learning, such as visiting peace monuments or buildings related to the atomic bombing and even tracing the actual evacuation routes used by survivors. We asked some schools to use them on a trial basis and give us feedback for revisions. This year, we gave them to 8 schools including one from Hawaii. With the help of students in the broadcasting club, we developed the Voice Guide System of Peace Monuments for the visually impaired, using the Hiroshima Archive App. We also use A.I. to colorize black-and-white photos taken before the bombing. They help survivors remember their forgotten experience vividly. They also help us realize that people in those days were leading an ordinary everyday life just like us today and enhance people's awareness on the importance of peace. Many media outlets, including the Japan Times, showed an interest in our use of A.I. and did feature stories on our project. We now have over 50,000 followers on Twitter. One of our members used the photos to make a short film, which won a prize at the United for Peace Film Festival, and was invited to the UN in N.Y. and Paris.

### 3. Conclusion

Through these activities, we have built a close relationship with atomic bomb survivors. More and more people are becoming interested in our activities and the importance of nuclear abolition. We will continue to give more workshops and invite people to experience our activities and revise our workbook, Hiroshima Archive Apps and Voice Guide System.

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## Surviving an Era of Globalization — To Be Confident Learners of English —

SGH Number: 2651 Yamaguchi Prefectural Ube Senior High School

Key words: globalization, international language, Japanese English, confident, embarrassed

### 1. Introduction

English is now an international language, and that makes us think that many people in the world speak English as their native language. However, the truth is that only 6 % of the world population speaks English as their native language. In addition, we have been strongly influenced by American or British English since we started learning English, and that makes us feel embarrassed about communicating in so-called “Japanese English”.

The purpose of our research is to uncover some factors that make Japanese people feel uneasy about communicating in English and to propose some ideas for using English confidently.

### 2. Methods and Results

Our research includes two methods. First, we gave out a survey on attitudes toward learning English among Ube High School students and teachers of English. Our students listed “Listening” and “Speaking” in the first and second place as their weak skills. In addition, about three-quarters of them thought they should speak English like native speakers. Our English teachers also answered “Listening” and “Speaking” as the most required skills for living abroad.

Next, we carried out listening tests for international students, following the three steps below.

Step1: We made three types of sound recordings using Japanese, American, and Asian speakers.

Step2: We prepared two types of answer sheets: a script sheet and an impression sheet. International students marked the script sheets with five symbols: “P”, “I”, “S”, “U”, and “O” under the words they felt strange. They marked “P” for pronunciation, “I” for intonation, “S” for speed, “U” for unknown words, and “O” for others. On the impression sheet, they gave us their feedback on their overall impression of the tests.

Step3: We conducted listening tests on international students.

We have conducted the tests on 6 international students so far. All of them answered “Good” about the speed of English recorded by our members, while they felt the intonation and pronunciation of certain words was a little awkward.

### 3. Conclusion

The results of the questionnaires suggest that especially “Listening” and “Speaking” are the key skills for us Japanese learners of English. Regarding the listening tests, our research is still in progress. The task we have to tackle first is to increase the number of international participants and collect more data. Then we need to analyze the results of our research in more detail. At the end of our research, we plan to propose some ideas for using English confidently.

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## Say what you mean, mean what you say

2652: Tokushima Joto Senior High School

Key words: low-context, high-context, diversity, cinema education

### 1. Introduction

Japanese people are often said to be poor at communication. One possible reason is because Japan has a high-context culture. High-context communication relies on implicit communication and nonverbal cues, so a message cannot be understood without a great deal of background information. On the other hand, low-context culture relies on explicit communication, and more of the information is clear from the message alone. As the world becomes more globalized, we are beginning to communicate with more people from low-context societies. We think it's time Japanese people learned some effective ways to deal with low-context communication.

### 2. Methods and Results

Last summer, we went to Indonesia on a school trip and worked on some projects with local students. We were impressed with their high communication skills. Both Indonesia and Japanese cultures are classified as high context. However, Indonesia is a diverse country with more than 300 different peoples, about 700 languages, and five major religions: people are required to accept opinions by others who have completely different cultural and religious backgrounds. In Japan, on the other hand, most citizens are Japanese and speak only Japanese. When realizing this difference, we wondered whether Japanese people can improve their communication skills by experiencing diversity. Drama education is an effective way to learn diversity. Therefore, we did some research on drama in education in order to find an effective way to communicate with people from low-context cultures.

### 3. Conclusions

We need to communicate with various people with different cultural backgrounds. Through our research, we found that communication styles in a low-context culture are not necessarily better than those in a high-context culture. People in a high-context society can consider the feelings of others. However, they sometimes fail to tell their feelings clearly because they depend too much on the context. In theater education, students can learn various ways of thinking because they can see a situation from many sides. Moreover, drama education can be easily introduced as part of regular classroom lessons. A good example is role-playing activities in English lessons, where students can learn low-context styles as well as improve their English by memorizing and acting out scenes from Western drama. Language and culture are strongly connected, so acting in the target language is more efficient. Therefore, we suggest creating drama education as part of Japan's English curriculum.

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Keywords: animal / zoo / animal testing / animal euthanasia

## 1. Introduction

In May this year, some students organized a visit to Tobe zoo, the local zoo in Ehime. There we heard a zookeeper say that zoos should not exist. We discussed whether there should be zoos or not and asked our Singaporean friends about it via Skype. After that, we learned about animal testing for making medicines and cosmetics in Japan and our Singaporean friends told us about animal euthanasia conducted in Singapore zoo in April this year, which broadened our interest on discussing animal testing and animal euthanasia.

## 2. Methods and Results

We conducted a questionnaire with more than 200 students in our school, people from other countries and living in the area. Also, we discussed problems with high school students in Singapore through Skype. We gave the theme of the discussion beforehand and listened to the results each student had come up with. Then we discussed more and deepened our thoughts. The following are the results.

### (1) The role of zoos

Most Japanese students are for having zoos, but the Singaporean students don't necessarily agree to it. Moreover, people from countries which have large zoos tend to disagree to the idea of having zoos.

### (2) The pros and cons of animal testing

Japanese students are all against animal testing and suggest seeking alternative ways for experimenting. However, many Singaporean students and people from other countries are for it because they can develop new medical treatments and new effective medicines.

### (3) The pros and cons of euthanizing animals

As the Singaporean students experienced the euthanasia of Inuka, a polar bear, in April, their opinions are more reluctant toward euthanasia. On the contrary, because Japanese people are more likely to avoid discussing death, most students are against it.

## 3. Conclusion

We found many different ideas between Japanese and Singaporean students. Not only are there different ways of connecting with animals, but also religions and lifestyles as well. We should acknowledge these differences and think about how we can coexist with animals and each other.

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## Awards

N/A

## What Regional Revitalization Brings

2654 : Kumamoto prefectural SEISEIKO senior high school

Key words: regional revitalization, U-turn, starting a business

### 1. Introduction

Today, there are many problems in the world and Japan has to help solve them. However, Japan has a large sum of debt and Japan's finances are in critical condition. I thought that reconstructing the finances could lead to Japan's sustainable international activities. Also, the development of rural area's economy is needed to improve Japan's economy.

### 2. Methods and Results

I constructed a hypothesis "Under populated areas need large enterprises to make more employments and increase the number of people who settle down." I read some books or papers on precedents of starting businesses with U-turn workers. This was because I thought that they could attract companies by making profits. Also, I interviewed a company, a local government and U-turn workers. Through the interview with them, I found it was difficult to move a company from lack of human. In addition, starting a business with U-turn workers turned out not to be easy.

### 3. Conclusion

I realized that my hypothesis was outside the bounds of possibility. However, it was true that U-turn workers can make profits and give a boost to a regional revitalization. It is ordinary ways, but I suggest that the number of U-turn workers should be increased and that local governments should back up their activities including starting a business. I think this will need new and effective ways to accept them.

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NAGOMI Town Community-Reactivating Cooperator Squad, NAGOMI no Sato Regional Development Council  
YONEKAWA HIROKO

## Ideal Education System in Japan

2655 : Oita Uenogaoka High School

Key words: Individuality, Groupism, Independence, National characteristic

### 1. Introduction

Our group started researching education. We went to Australia for SGH program and experienced Australian school life for a week. We felt that Australian students are more active and creative than Japanese students, enjoy studying at school, and teachers respect students' individuality. From this experience, we became interested in the difference of education in each country.

As we are doing active learning now, we thought that if we adopt the systems of foreign countries, education in Japan might be improved, and as you see that active learning works better, we can get creativity and communication skills that we can't get with the former Japanese education system.

### 2. Methods and Results

First, to compare with Japanese education, we chose Finland whose education is highly valued and the overall position of the education level was first place in the world, (according to the research of OECD), and in Japan, active learning is adopted from this country, so we researched the education in Finland and compared it to Japan's. Also, we would like specific contents, so we will give a questionnaire to senior high school students and interview ALTs. Its contents are about the unpleasant parts of Japanese school systems and differences.

When we researched about Finland, we found there are two different points from Japan. One is that Finland aims at individualism while Japan aims at groupism, so they put emphasis on raising independence and cultivating individuality. The other is that Finland is a high welfare state. All children have various social experiences equally during long vacations and they can study hard to acquire a lot of knowledge. They establish the education system with fairness and rationale.

### 3. Conclusion

To engage in studying more actively, Japan adopted active learning. However, we thought maybe adopting a foreign country's education system as it is isn't a good way to improve our learning ability. In each country, they have different political issues, characteristics of culture and social situations. For example, Japanese students are inferior in reading comprehension ability. To solve this, how about adopting a new active learning that gives everyone multiplex document or data, reading it, and select the correct one. Then, make an opinion each and discuss with each other. If we do that, it might be possible to improve it.

Like this, the first thing we must do is to understand the characteristic and social situation of Japan. After that, basing on other country's educational system, we need to apply it to fit us. We have to think what is needed by us, and what is required of us looking around the world, there are many kinds of education systems. We suggested adopting them. For example, taking a longer vacation like the USA can let us experience various things. To improve Japanese education, in addition to academic, we believe there is another important thing.

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## Make the most of ancient grain's power

### -To reduce the amount of unproductive farm lands by millets cultivation-

2656 Gokase Secondary School Keisuke Kuroki

Keyword: Unproductive farm land / Millet

#### Introduction

In Gokase, there is a problem of increasing amount of unproductive farm lands. To this, I have decided to investigate how Millet will help solve this problem. Millets are kind of grain that are easier to grow and harvest compared to other grains such as wheat, rice, and so on. Furthermore, planting millets are more cost effective, and requires less laborers and energy consumption. By introducing millet cultivation to Gokase farmers, it will reduce the amount of unproductive lands in the Town. If this research is successful, I intend to apply the same strategy to reduce the amount of unproductive farm lands and to solve the food shortage problem in the world. (According to the World Census of Agriculture and Forestry, unproductive farm land refers to lands that are once used for cultivation, but are now left unused for more than a year, and are not intended to be used for cultivation.)

#### Methods and Results

My research has several parts. First, I joined a workshop called "Owner system of *Yakihata*". It was held in Gokase and we raised millet in the workshop. Second, I calculated how much millet we can get from a mat of *yakihata*. Third, I did a trial calculation of the amount of millet that can be harvested if we use the unproductive farm lands in Gokase based on the data on the previous step. Finally, I made a model plan on millet cultivation and propose it to the town office.

This December, we will have the second workshop. On the first workshop, we harvest millets, but it can still regrow. So on the second one, we will do the second harvest. I will once again gather data to do another trial calculation about millet production. A calculation that combines the data from the first harvest and the second harvest.

#### Conclusion

As this research is still ongoing, I need more data to prove the validity of my hypothesis which is that millet can be a solution to the problem of unproductive farm lands. I hope my research result will provide a valuable effective approach to solve the worldwide problem of unproductive farm lands and hopefully to solve the world food shortage problem caused by the expanding global population and climate change.

#### Reference

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 Tourism Association in Takachiho,  
 Institute of Japanese Millet Association

## Aynu puri a=eraman

### ~ Educational action for the preservation of Ainu culture ~

SGH Number: 2701

Name of School: Ritsumeikan Keisho High School

Key words: Indigenous people culture

#### Introduction

A new national museum about the Ainu culture is scheduled to open on April 24, 2020 at the lakeside alongside a recreated Ainu village and space for cultural experiences. In contrast, the Ainu language was specified as one of “UNESCO Atlas of the World's Languages in Danger”. It means that there are a lot of young people who don't know about the Ainu cultures. In Hokkaido, there are a few schools teaching about Ainu culture and languages. Compared with other countries, including New Zealand or Hawaii, where people think that Indigenous people's cultures are so important, Japan is very much behind in every single way.

#### Methods and Results

In class

We have started learning the Ainu language since this year. Mr. Sekine, who has taught the Ainu language for more than 20 years, comes to school every week and we learn many things about the Ainu language. And we also learn other things of Ainu's culture which are connected with language.

Fieldwork at sanctuary of Ainu

In October, we went to Biratori in Southern Hokkaido where many Ainu people are living. We met children who are learning the Ainu language in Nibutani Elementary school. Then we went to an Ainu museum. There are a lot of daily necessities and we were so impressed. We had discussions with Maori students who have studied at this school for 3 months.

Action for the world

In November, four students went to New Zealand to learn about the Maori culture. There are many hints for our educational action for the preservation of Ainu culture

#### Conclusion

We want to suggest an educational action for the preservation of the Ainu culture.

First is “DESIGN”. Ainu designs are not popular in Japan. They need to be reflect in “nail art”, “embroidery”, “school uniforms in Hokkaido” and “Key chain” which use traditional Ainu designs.

Second is “FOOD”. We want to change “Kiyusoku” in Hokkaido to traditional Ainu meals.

Third is “LIVING”. We want school to make art class with Ainu “wood carving”, learning the “Ainu language” and making “traditional Ainu clothes” in home economics class.

The goal for these three suggestions is to learn the importance of learning the Ainu spirit behind their cultures. Because Ainu spirit have strong messages that don't use so many things so this way of thinking is important for our modern lifestyle.

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# Hands of Relief Aid for Creating Safe Environment to Live in the Future Based on Hokkaido Earthquakes What We Learned through Our Two-Day Experience

SGH 2702: Sapporo Nihon University High School

Key words: Blackout, Seismic resistance of building

## Introduction

Japan is prone to earthquakes. Here in Hokkaido, a big earthquake also occurred in September this year. Focusing on the durability of the buildings in Hokkaido and the blackout that affected many parts of Hokkaido, we conducted a research on issues related to Sustainable Development Goals (SDGs), especially, housing structure that allows us to live safely in the future and ensuring safe electricity supply.

## Methods and Results

The earthquake that occurred in Hokkaido was about the same scale as the earthquake occurred in Osaka. But the number of damaged houses was seven times higher than the number of those in Osaka. One of the causes of this difference was in earthquake resistance of the buildings. The damage of an earthquake on a building is given by the weight and shaking area of a building. But it is thought that this force was small in the houses of Hokkaido, because their structures are light and strong. Thus, the damage was reduced to a small scale. On the other hand, electricity outage, where all of Hokkaido was enveloped in the dark after the earthquake, made people feel fear. Why did the electricity outage happen to the areas with no earthquake damage? The reason for this situation is that Hokkaido electric power is isolated and the scale of management is very small.

## Conclusion

If cooperation between electric power companies in Honshu is taken, and even if some of the power plants stopped, it will not easily result in a large power outage. Although Hokkaido can receive electricity from the Tohoku region, however, long distance power transmission uses DC power, which is insufficient in quantity. In other words, Hokkaido's electricity supply is practically isolated.

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## Inquiry into a Novel and Sustainable Model for Local Communities

2703: Iwate Prefectural Morioka Daiichi High School

Key words: local community, work-life balance, sustainability, Taiwan

### 1. Introduction

Today, an aging society and population decrease are swelling out in the whole Japan; the more serious condition can be seen in Iwate Prefecture. It is needed to swiftly tackle the problems ensuing from this condition; for instance, the deterioration of services provided by the local administration, and the weakening of bonds in social communities. It is imperative for constituents to pursue sustainable local communities with high awareness. Other advanced nations also face an aging society and population decrease, so they are more or less bound to deal with these problems. This report shows the result of our inquiry into a more versatile solution, utilizing the outcome of fieldwork conducted in Taiwan.

### 2. Methods and Results

In this study, we considered a new model for local communities from the two viewpoints: finding the key component in reconstructing our communities into more novel and sustainable ones, and a method to influence lifestyles of constituents, which could possibly lead to raising awareness of necessity of the reconstruction. To discover the key component of new model from the former perspective, we conducted an attitude survey on people's ideal local communities at an event where many multigenerational people would attend in cooperation with the welfare department of Morioka city. To find the best method to raise awareness of constituents from the latter perspective, we investigated working environments; first we interviewed some employees in Iwate, and then in Kansai region. We created a hypothesis from the fieldwork above, and verified the validity and versatility of our assumption in fieldwork in Taiwan.

### 3. Conclusion

Through fieldwork in Japan, we found the potential keys to reconstruct more novel and sustainable local communities: multigenerational mingling through activities of local culture such as traditional food and performing arts, and social changes of industrial structures facilitated by introduction of agricultural diversification and change of working environments led by Work-Style Reforms promoted by the Japanese government. As of November 2018 we are conducting fieldwork in Taiwan to verify the validity and versatility of our hypothesis. Utilizing the results, we are planning to hold an event at Morioka which may contribute to forming a new model for local communities. Details will be reported in a poster exhibited at the SGH forum.

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### Awards

# Can We Use Traditional Japanese Food to Revitalize the Depopulated Villages?

2704 Sendai Shirayuri Gakuen

Key words: Depopulated villages Depopulation Safflower

## 1. Introduction

We are exploring with the theme of “Can We Use Traditional Japanese Food to Revitalize the Depopulated Villages?”. The reason for choosing this theme is that we wanted to preserve the culture and charm being lost due to depopulation of the Tohoku region where we live.

From this thought we started exploring activities in the Takase district in Yamagata Prefecture as a setting. This area is an area called a marginal settlement. The depopulated village is area that definition of a depopulated village “A village in which people aged 65 over Account for more than 50 percent of the population”

We are conducting on-site surveys in the area called Takase district in Yamagata prefecture, and we are exploring by involvement with local people.

## 2. Methods and Results

As a result of the questionnaire “Are there any local cuisine that you know in the area where you live?”, it was found that consciousness to depopulated areas was low. Based on the results We thought about sending out information from them. And we are exploring with the trend of discovering the charm of Takase district, communicating with local people, sending out information, participating in events, product development. We participated in the local festival and carried out product development. And we sold safflower’s harbarium made in product development at that festival and school festival.

Also we went to Taiwan study tour and learned about local food in Taiwan. In Taiwan, We talked about the relationship between food and the environment. From these experiences we were able to learn about not only the Takase district but also the area called the depopulated village with a broad perspective.

## 3. Conclusion

We delivered the charm of the Takase district through on-site investigation and product development, and we are considering the creation of brochures. And through this brochure we would like many people to know about the Takase district. Based on our presentation and product development, we believe that as many people as possible get interested in the Takase district.

We would like many people to see this brochure, and want to revitalize the Takase district. And furthermore we would like to think about ways to get to know about Takase district.

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## Awards

## Rice Bran

### - A solution to malnutrition in developed countries -

2705: Akita Prefectural Akita Minami Senior High School

Key words: Rice bran, developed countries, malnutrition

### 1. Introduction

According to WHO, there is a problem with more people in developed countries, including Japan, lacking the necessary vitamins and minerals. Also, according to FAO, people, especially those who live in developed countries, tend to choose food that is high in calories, but has a low nutritional value such as fast food; fast food is inexpensive and quick and healthy foods are often expensive. This problem is called “hidden hunger” because there is a difference between malnutrition from hunger and malnutrition due to an unbalanced diet.

We decided to focus on rice bran, which is not commonly used even though it is abundant in vitamins and minerals, as a solution to solve this problem. We propose making rice bran patties in hamburgers to be sold worldwide as a solution to malnutrition.

### 2. Methods and Results

We got rice bran to consume vitamins and minerals that “hidden hunger” lacks. Rice bran is the germ and the cuticle of brown rice. According to Sasaki (2016), rice bran has about 90% of all the rice’s nutrients and a lot of vitamins and minerals. This means white rice only has 10% of rice’s nutrition. However, a paper by the agricultural institute of residue chemicals said that a lot of pesticides are used on brown rice that is made into rice bran, so people should use organic rice bran.

We surveyed 200 Akita Minami High School 2nd year students about rice bran and visited “Sanchoku-Center Katanomise” in Ogata-village to research about rice bran ice cream. When we asked about rice bran, most of them answered “Have never eaten rice bran” and “Do not want to eat rice bran” we guess that rice bran is not well known as food and has a bad impression. We actually ate rice bran ice cream at “Sannchoku-Center Katanomise”. It tasted nice, however it had a rough texture. Therefore we made hamburger steaks adding rice bran to eat rice bran as a side dish.

### 3. Conclusion

We think it is important to improve our dietary habits. However, it is not easy for us to change our dietary habits, even if we spend a great of time and effort. Therefore we suggest people should add healthy foods to their diet instead of changing their everyday meals entirely. We can make food more nutritious by adding rice bran named “N ○○” , even if the food is initially unhealthy.

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### Awards

None.

## Let's make a community in which no one will be left behind

2706: Futaba Future School

Key words: Community revitalization

### 1. Introduction

It is said that the decommissioning of the nuclear power plant in Fukushima will take about 30 or 40 years and the local community will enter a new phase. When it comes to the revitalization of our area, we have to think about how to make a community in which all members will be able to live safely. We are approaching this ideal situation through our New York study trip and under the slogan "No one will be left behind."

We believe that if we hope to make a better community as well as to revitalize from many hardships, we must focus on enhancing our local community to manage promoting the region in addition to developing infrastructure.

### 2. Methods and Results

#### 【Analysis of the status quo】

- Fieldwork in order to see the current state of the region with our own eyes
  - Visiting several places like town offices in Futaba area, medical and welfare facilities on our field trip
  - Researching local residents' opinion and feelings
- Result and thinking: Through this research, we are able to learn that even if local governments are making an effort to revitalize their towns, it is not too much to say that communities broken up by the disaster have not yet recovered and that there remains hardships among local residents who have returned. They face problems such as a lack of relationships among each other and with temporary workers living in their towns.

#### 【Projects to achieve our goals】

- 2 steps we need to take
  - The 1st step is to make strong relationships among local residents.
  - The 2nd step is to make strong relationships among local people, local companies and local government as a unit managing to improve towns.

#### 【Our practice】

- The 1st step: An event doing "nagashi soumen" in Naraha town where only about 50% local residents have returned.
- The 2nd step: Managing doing nagashi soumen with a local organization called NPO Naraha Mirai

#### 【New York study trip】

- Meeting with the staff of New York city officers / Discussion about SDGs with UN-youth members
- We are able to notice the difference of citizenship between a typical Japanese community and New York City. Unlike a typical Japanese local government, in New York City, local people and local companies, as well as local government are active to manage to make this city better. Moreover, all of them have wanted to make the city in which anyone, even someone from far away is able to think of New York City as their home.

### 3. Conclusion

Through this event we were able to have a strong relationship with local governments and local organizations as well as local residents. It was the first event for local residents to have an opportunity to exchange with other residents, and this small step was the beginning and trigger of the start of events which local residents now lead.

It will take a long time for us to make a better local relationship like the New York community, but we will continue to create there have this kinds of opportunities after graduating from high school.

### References

Books, White papers, Interviews, Field working

### Awards

Nothing

## What We Should Do for The Labor Shortage Problem due to Decreasing Population

2707: Saitama-prefectural Fudooka High School

Key words: the low birth rate, decreasing population, aged people, the shortage of labor force

### 1. Introduction

Japan need to tackle the following three problems that have many different causes at the same time; the low birth rate, which causes decreasing population, growing population of aged people, and the shortage of labor force. We will take the labor shortage problem and discuss the challenges and measures against it. We would also like to present an ideal vision that Japan should have.

### 2. Methods and Results

The Japanese government is now trying to solve the labor shortage problem by approaching following four options; foreign workers, Artificial Intelligence, women's working environment, aged people as a major labor force. But after conducting our research by reading a lot of books and references, we come to think those four approaches will not directly lead to solving the labor shortage problems. The government aims at maintaining the economic scale. For example, convenience stores are open 24 hours now, but do we really need that kind of service when one third of Japanese population are over 65? We need to find another solution other than aiming at maintaining the present economic scale. Through our discussion with our classmates, teachers, and foreign students, we came to conclusion that what we need is strategic down-sizing.

### 3. Conclusion

The problem of decreasing population is hard to imagine and difficult to take it as our own problem. We believe it is important to think what affluence and wealth is for us. We also believe that we need to make our society compact in accordance with decreasing population.

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### Awards

None



## Integrated Approach on Natural Disaster to Create a Sustainable Hazard Management

2708 Waseda University Honjo Senior High School

natural disaster prevention, a comparative study, integrated and and sustainable system

### Introduction

The purpose of the present paper is to understand the differences between Indonesia and Japan regarding natural disasters and to propose ideas for more effective and sustainable natural disaster prevention. Located on volcanic belts, Indonesia and Japan are countries that are often met by many kinds of natural disasters, such as volcanic eruption, landslide, earthquakes, or tsunami. By sharing ideas considering natural disaster prevention, it will be possible to create better solution.

### Methods and Results

“What is an effective system for natural disaster prevention considering the measure taken in each country?” is the research question we formed through library study and online discussion with students from our research partner school (SMA N2 Yogyakarta, Indonesia). After online information sharing and discussions including a few video conferences with our partners, we visited Yogyakarta for 4 days for a joint fieldwork. In Yogyakarta, we visited two disaster prevention institutions (Regional Health Office of Sleman Regency, Yakkum Emergency Unit) to learn how system works at the time of natural disaster and how they contribute to disaster prevention education in the neighboring community. We also interviewed a few residences in Dome Village, a small community which once destroyed by an earthquake and has been reconstructed through the effort of the people in the community.

From the fieldwork and discussion with our partners, we found strengths and weaknesses of disaster prevention system in both countries. The strength of Indonesia is that disaster management system is more integrated. Once a natural disaster hits the area, emergency rescue is activated and food, drinking water, shelter and medicine are distributed in an organized way. The weakness is there are little or no practices of evacuation drill, which would raise awareness of disaster prevention in community. On the other hand, evacuation drills in schools and distributing hazard maps in communities are common practices in Japan. The weakness of Japan, however, is organizations for disaster prevention is not integrated.



\*figures, from left to right;  
 - at the partner school  
 - at Regional Health office  
 - at Dome Village

### Conclusion

Upon the findings stated above, the students from Indonesia and Japan propose two solutions. One is to create an international community of high school students for raising awareness of disaster prevention. The other is to appeal for establishing an integrated department for disaster prevention in Japanese government and introducing evacuation drills in all of schools in Indonesia. It is too late after a disaster happens. Indonesia and Japan can leverage their strength, and consequently, good results can be expected.

## Earthquake countermeasure manual for foreign tourists

2709 : Chiba prefectural Naritakokusai high school

Key words ; Tourism field, Disaster, Transmission of information, Crisis management

### 1. Introduction

In order to let foreign tourists know how to protect them from earthquake,we made an Earthquake countermeasure manual for foreign tourists know, and we focused on Narita city.

### 2. Methods and Results

To make a manual we made a research for our school students and short-term international students to learn the difference of values. Also, we learned the basic information of the earthquake from the crisis department of the city office and the fire department. To learn the good design, we visited Bunkyo Gakuin University .

### 3. Conclusion

Our goal is to spread it.

### References

Bunkyo Gakuin University

Crisis department of Narita city

Fire department of Sakura , Yachimata city and Shisui town

### Awards

# Let's take photos together with Highschool Students

## How to offer the elderly an incentive

2710: Chiba prefectural Matsuo Highschool

Key words: global aging, photo, iPad, health promotion, motivation in life

### 1. Introduction

In the aging society, elderly people in Japan tend to be isolated. 25% of them have no friend. But actually, many of them want to interact with young people. Over 60% hope for interaction with younger generation. So we considered and practiced interactions between elderly and high school students with photographs.

### 2. Methods and Results

Actually we held a workshop in October 2018. Many elderly attended the "Let's take photos with JK!" We used a table type device which has a wide viewing angle at the time of shooting with the elderly. High school students lectured the elderly on photography method and how to post photos to Instagram.

The workshop was successful. As expected, the tablet type device with a wide field of vision was easy for the elderly to use. The tablet type computer itself was unusual for them, and they seemed to be interested in its operation.

### 3. Conclusion

For the elderly, photography can be an incentive, a reason to live. And, interactions with young people can energize the elderly.

For the next step, we are planning to collaborate with City Hall. We will implement a photo contest for the elderly, and post excellent works in regional publicity newspapers. We believe events will make the elderly more active.

We hope those events will become worldwide events. Photos need no words. These events will connect the world.

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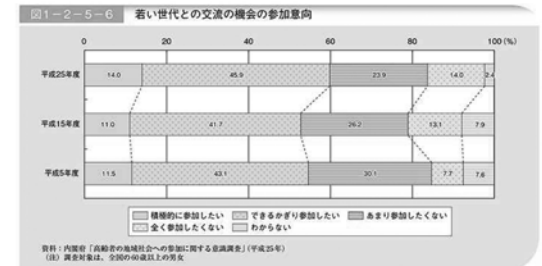
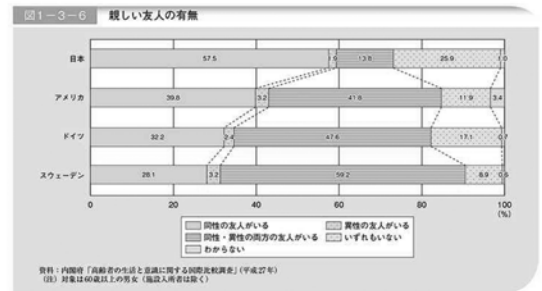
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### Awards



## **Examining the Value of a Professional Sports Team inside its Hometown**

### **- Evaluating from attendance rates of Chiba Lotte Marines -**

2711: Tokyo Gakugei University International Secondary School

Key Words: Community, Sustainability, Sociological Studies, Human Geography

### **1. Introduction**

One of the unmarked problem in the Japanese society, is the collapse of the identity as a region, especially in suburban areas inside the three main metropolis. This is a common issue for most of the suburban areas inside the developed countries, and will be a growing concern for developing countries. In this research, we used the case of our own local baseball team, Chiba Lotte Marines, and researched about their efforts to be the local favourites and bringing benefits to the hometown.

An idea of “community-based clubs”, even for larger, profitable clubs, will benefit themselves and their hometown as they provide stronger value to the local community. “Community-based clubs” not only brings the economic benefits, but also brings the bond between the residents of the area.

### **2. Methods and Results**

We learned the methodology on doing a research from sociological point of view, and also some of the efforts the local football clubs are doing in England by attending the UCL Japan Youth Challenge. For methods, we were able to conduct a fieldwork and contour-map making process with the advice from top researchers. English football clubs also uses their youth teams and the worldwide loan-player system to attract fans, which was significantly different from NPB. Thus, clubs such as Watford and Brentford are successful with the locals, although their location is somewhat similar to Marines’. Our research, also including data reviews and interviews to the Marines’ board discovered that the team (and NPB) is working well to spread baseball to non-fans using existing backbones. However, there are limits to any sort of “local” approach clubs and local government takes in the aging society and some newer approaches are needed to sustain the team and the region for the future.

### **3. Conclusion**

As local-level approaches has limits in terms of potentials for the long-term future, for smaller market sports teams like Marines, and more importantly, regions or cities, collaborations with similar regions nearby, and also throughout the world would be a solid option to sustain their identities. These can create new rivalries, potentials for loyal fans outside the regions bringing economic benefits and ties to the region.

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## Let's think about focusing on the correlation between local environments and renewable energy while playing a board game!

2712 Tokyo Tech High School of Science and Technology

Key words: renewable energy, power generating methods, local environments, board game

### 1. Introduction

These days, fossil fuels are used to generate electricity around the world. A large amount of carbon dioxide is produced, and that causes global warming. So, we should stop them by keeping a balance of fossil fuel and renewable energy. However, those are some difficulties. One of them is that the power generation method depends on the local environment.

For example, if there isn't a big river, we can't use water power to generate electricity, if there isn't a volcano, we can't use geothermal power for it... In this way, when we try to solve the problem, we must think about what kind of generating method fits the local environment and weather.

### 2. Methods and Results

For spreading this attitude to people who bear the future and having them think about social problems, I made a board game about power generation as a study aid. In this game, players create various types of power plants while being conscious of the environment and surrounding happenings.

I think this is one of the enjoyable ways to learn about energy and environmental problems.

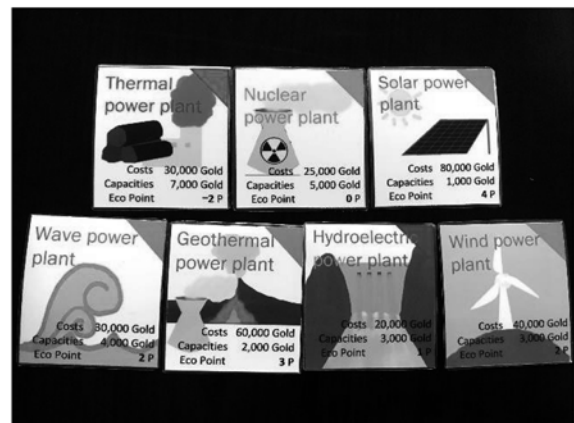


Fig. 1 Sample of Game Cards

### 3. Conclusion

I made a game and played it with high school students in Malaysia when I went to study there. As a result, I could get good reviews from them. However, I found that some improvements are needed. So, I'm still trying to optimize it.

### References

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- Kansai Electric Power
- METI Ministry of Economy, Trade and Industry



Fig. 2 Out First Attempt with Malaysian High School Students (August 2018)

## An educational experiment with *karuta*, a traditional Japanese card-matching game, to foster children's motivation to attain literacy in East Timor

2713: Aoyama Gakuin Senior High School

Key words: East Timor, Coffee farmers, low literacy rate, Japanese card-matching game, learning while playing

### Introduction

Aoyama Gakuin students' independent study group made its 3<sup>rd</sup> visit to mountain villages in East Timor to study an NGO's support for fair trade coffee production. By the 2nd visit, it had been found that in order for those local farmers to gain independence, and consequently have access to the marketplace, education is indispensable. To do this, however, their low literacy rate has to be improved. To tackle this issue, the student group brought hand-made card-matching games and saw how the children enjoy the game, wondering if vocabulary learning, word recognition, and learning of spelling takes place while playing it. The Aoyama group also tried to ensure that the children would play the card game all by themselves, after the end of the group's visit.

### Methods and Results

The student group made four sets of the Japanese card-matching game, *karuta*, in Tetum, the local language, each of which consisted of 50 pairs of reading cards and picture cards. Groups of up to 30 pupils gathered around them. The picture cards were spread on the ground. One of the group members read cards, and the pupils tried to get as many cards as they could. Then, the whole stack of reading cards was handed over to one of the local pupils. Now that she had learned how to play, she started reading the cards aloud one by one, and the local pupils continued to play with excitement and enthusiasm. Eventually, the group dedicated those sets of *karuta* to the village pupils.

### Conclusion

The pupils were absorbed in the card-matching game. In fact, several cards showed things not quite familiar to them, but they were eager to identify the items. It suggests this process might be beneficial in developing their vocabulary. Moreover, they were bold enough to play the role of the reader, which should develop reading motivation and confidence, and it is hoped will lead to the pupils playing the card-matching games independently. A problem for many of these pupils is that school is seen as authoritative, textbooks are in Portuguese rather than their native language, and school is simply often not seen as useful or fun. It is hoped that learning through games may be a small step towards independent learning and the realization that learning can be fun. If other types of card game are introduced in their daily settings as pastime activities, their literacy rate may be boosted and it may lead to the pupils welcoming more learning opportunities. Only then would they be confident in meeting people who visit their villages, handling necessary documents, and doing business with people who come to purchase their coffee beans in the future.

## An Effective City Greening Project

### To make rapidly urbanized world cities sustainable

SGH 2714: Fujimigaoka High School for Girls

Key words: Urbanization, sustainable city, greening project in Singapore  
Comparison of housing condition in Japan and Singapore

#### 1. Introduction

We researched Singapore's housing policy because we are interested in the fact that Singapore has implemented successful housing and green policies despite its limited territory. Compared to Singapore, the Japanese housing situation is deplorable, with, for example, high rent, high vacancy rates in high-rise apartments, and a lack of greenery. People who live in central cities are dissatisfied with their situation. Therefore, we think Singapore's housing and green policies could be one solution to Japan's problem. Making rapidly urbanized world cities sustainable will lead to a sustainable planet. This is why we chose urbanization and greening policy as a theme.

#### 2. Methods and Results

First, we researched the housing policy in both Singapore and Japan. Our next step we will interview local people in Japan and Singapore about their satisfaction rate with their housing situation. Additionally, we will give a housing survey to students at our high school and Singaporean high school and compare the results. Finally we will interview construction companies in both Singapore and Japan about constructing housing in their respective countries, looking at similarities and differences. We will analyze the above data and propose a workable solution for Japan which takes into account the environment and culture.

#### 3. Conclusion

In Tokyo, urbanization is progressing rapidly, which leads to the destruction of nature. This leads to families, especially those with children to leave center cities. Also rent is too high for average people to afford. This results in high-rise apartment having many vacancies. As a solution we propose adapting parts of the Singaporean system such as "Housing and Development Board" and "Central Provident Fund" to Japan.

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#### Awards

## Happy Golday

### ~The golden silk will save poor Cambodian and Japanese babies~

2715: Yokohama Municipal Minami High School

Key words: poverty, Cambodia, golden silk, baby, underwear, business plan

#### 1. Introduction

We have two purposes with this plan. One is the improvement of life for people who live in harsh conditions in Cambodia, and the other one is solving the problem that Japanese babies have about their clothes. Currently, around 70% of Cambodian people can't make a satisfactory living, for there was a horrible civil war about 30 years ago. When we saw a girl and an old woman collecting garbage at midnight in one video that UNICEF made, it made us think about what we can do to help them, so we decided to focus especially on poor women in Cambodia who tend to be involved in various dangerous incidents.

#### 2. Methods and Results

First, we conducted surveys of the poor in Cambodia to check the real demands. One of the members of our group actually visited Cambodia in this summer and saw how they lived.

Secondly, we decided what poor Cambodian women would make as their products. We researched unique part of Cambodian culture and were attracted by "Golden silk", which has an original beautiful color and high humidity retention because of the ingredient "Sericin". We thought that it must be good for the sensitive skin of babies' and came up with the idea of making underwear. We repeated a survey at a nursery by distributing questionnaires to parents there. The results from the papers showed that some people have problems for a brief period of using baby clothes and suffering from rough skin.

At last, we started to show our business plan to many people and got advice for its improvement. We visited "Japan Finance Corporation" and consulted a woman who helps the self-employed on our plan. She pointed to the number of our customers and told us to project future numbers. Then we called at "Akachan Honpo" to learn about the current market for baby clothes and showed our plan to an expert, Mr. Ohara. He said we should reconsider for whom we sell our products to. Then, we brought our products to the nursery and asked the parents about price. Unfortunately, the price that we had set was too expensive. Finally, we'd like to add two research projects that were held in foreign countries, Cambodia and Singapore. In Cambodia, a local coordinator helped our research, by interviewing the poor. We asked if they'd like to participate in our project, and most of them seemed to be happy to join it as far as we supported their life well. In Singapore, we were able to survey the possibility of advance into overseas markets by interviewing the students at Singapore Management University.

#### 3. Conclusion

We consider that we should set the price lower by negotiating with silk farmer and replenishing stocks as cheaply as possible. We also need to change focus onto richer customers. As for the future of this plan, since decreasing birthrate and aging of the population is a big problem in Japan, we're thinking about producing underwear of the elderly.

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## Hosei University Kokusai High School student's attitude toward LGBT

2 7 1 6 : Hosei University Kokusai High School

### Key words

LGBT, lesbians gay, bisexual, transgender, accept, parade, pride, differences, minority, discrimination, equal, same-sex marriage,

### Introduction

Recent years, a lot of people are paying attention to sexual discrimination. Actually, we knew the word LGBT. Therefore we didn't consider about discrimination deeply. We thought that we had to know more about sexual discrimination and spread the information to everyone. This theme is universal. Everyone had better know that and we want you to active for equal.

### Methods and Results

Searched a lot of things and information about LGBT and knew the system of Japan to know sexual discrimination more deeply.

And then, we conducted a survey of 100 students at Hosei University Kokusai High School. We prepared three questions about knowledge and 5 questions about opinions of LGBT. After that, get the answers and we found some apts. From the answers, we could know what should we do and what should Japan will be.

### Conclusion

The survey indicates the students show a quite positive attitude toward LGBT but do not have knowledge about them. By acquiring the knowledge, we can be sure why we can be positive and how we can turn the positive attitude into something firmer and more determined.

Thorough the survey we have done so far, we have gained a certain amount of knowledge. We hope to continue this learning process. LGBT people are part of our community. If they can live comfortable, feeling secured, then so much the better for rest of us. If the weak of the society lives happily, We will investigate more deeply and provide information to the world.

### References

<https://tokyorainbowpride.com/lgbt>

<https://s.weddingpark.net/magazine/97/>

## **Suika revolution**

2717: Niigata Prefectural Kokusai Joho High School

Key words: agricultural wastes, new products, another profit

### **1. Introduction**

In Unuma area, vast quantities of fresh watermelon are often left in the field and bring huge food loss because of standards for the quality and the sugar content. As a part of our SGH project-based learning in high school, we discussed the solution for these disposed watermelons and finally we proposed to make cosmetics for skins and new healthy food since watermelons contain a number of good ingredients for our health. Also, we are now considering that other areas across the globe in which agricultural wastes are a complicated concern, could use our approach to reduce these wastes and develop new industry.

### **2. Methods and Results**

We made three products by wasted watermelons; hand-soap, skin toner and seeds chips. These products could be sold everywhere and we received positive reviews from other students in our high school.

Thus, we could find a practical way you can reduce wasted watermelon.

### **3. Conclusion**

In conclusion, we partly contributed to reduce a large amount of wasted watermelon through making three goods; hand-soap, skin toner and seeds chips. We also found several similar projects to reduce agricultural wastes in Haiti and Zambia.

Therefore, it could be said that our solution is beneficial and possibly applied in any areas around the world.

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## Change Labels Change Life ~a solution to modern malnutrition~

2718: Ishikawa Prefectural Kanazawa Izumigaoka High School

Key words: Food Labels

### 1. Introduction

We can promote consumers' control of intake of nutrition by making food labels easier to understand with graphs or pictures. In Japan, the nutrition balance of food had been improved by 1980 through a period of high economic growth, but now the balance is collapsing. People tend to intake too much that is harmful to them, such as fat. More and more people are suffering from lifestyle-related diseases not only in developed countries but also in developing countries, so this problem needs to be solved as soon as possible.

### 2. Methods and Results

First, we gave a survey to college students to research what they pay attention to in purchasing food. We chose the college students living away from their family because their eating habits tend to be ill balanced. They have to prepare meals for themselves and often have meals without thinking about nutrition. From this survey, we learned 70% of the students looked at food labels, but they checked only the use-by date and price, not nutrition. We also learned more than 90% of them know of the "Japanese Food Guide Spinning Top," so we have decided to make use of it in our food labels. Then, we visited "Tanita Cafeteria" to learn about their original nutrition labeling. They use bar graphs as their original food labels and we found that it is useful to visualize nutrition information. We were given advice about what we should pay attention to in making our original food labels and understanding how they work. From this research, we created two kinds of original food labels. After that, we visited America on our school trip. We gave presentations three times: in Princeton High school, Princeton University and in Ithaca Eco Village, showing them our original food labels. Through the study there, we learned about what American eating habits are like. We were able to get many good opinions for our original food labels.

### 3. Conclusion

Our two new kinds of food labels have a good effect on people to help control their nutritional conditions themselves. The first one is based on the "Japanese Food Guide Spinning Top", which shows how much nutrition we should take a day. The second one is made with a graph. We draw a base line of the recommended intake for one meal. With these food labels, we can enable people to be aware of what we have too much or too little of. From now on, we would also like to apply them to real situations. We are going to make stickers of our food labels and put them on processed foods such as *bento* or sandwiches. Some convenience stores take action, making displays for good food combinations. Therefore, we will interview the owners and cooperate with them to use their actions and opinions as an example. If possible, we would like to ask them to use our original food labels on their *bento* or sandwiches.

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### Awards

Nothing

## Training for Manila Train Lines

### Improving Railway Options in the Philippines

2719 : Nagano Prefectural Ueda Senior High School

Key words: Philippines, Manila, Study Tour, Independent Research, Trains, Railways, JICA, Development

#### Introduction

I joined my school's "Philippine Study Tour" in March 2018. There, I saw a lot of people who are suffering from poverty. Despite their suffering, they have dreams and goals, and I was impressed by their way of living. While I was there, I noticed that in Manila there are many traffic problems, but there were hardly any railways. I know that Tokyo has a lot of railways. Why does this difference exist?

#### Methods and Results

When I was in Manila, I met with JICA officers at the JICA Manila Office. I talked with them about this situation. When I returned to Ueda, I remembered this interview, I decided to research it on my own.

An officer at the JICA Manila Office told me that because the Philippines was ruled by the US, the American habit of driving everywhere was spread to Filipinos. This is why there are only a small number of train lines in Manila and most of them are run by different companies. These companies aren't originally train companies and are not experienced with managing train services. This has caused lots of operational trouble. In May 2018, JICA began an official development assistance program with the Tokyo Metro subway company and founded an organization called the "Philippine Railway Institute" to improve the train services. My research focused on finding and developing several suggestions to change the current situation to make rail travel more effective in Manila.

#### Conclusion

First, the railway operators should be unified. By only having one organization which runs the trains, efforts to support the railway will be easier and safety standards can be the same for all of the rail lines. Second, I think JICA and Tokyo Metro's recommendation to have some Filipino employees train in Japan would be very successful. Train companies in Japan can show them some accidents that have happened in the past. This makes them run trains safer and more accurately. Employees working in the Philippines can learn from the same curriculum as the Japanese employees do. I believe that this will make Filipino employees realize the importance of safety and accuracy. After studying in Japan, they can start to repair the railroads by using their experiences in Japan. Then, train lines in Manila will be able to provide good service.

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**Title Sustainable World Environment**  
**Sub title SGH Research Project in Mongolia**

SGH 2720: Affiliated Upper and Lower Secondary Schools, School of Education, Nagoya University

Key words: sustainable environment Mongolian cooperative experiment observation discussion

**1. Introduction**

We have a sister school in Mongolia whose name is Shin Mongol High School, which is in Ulaanbaatar. Since 2012 we have had an exchange program. In the pre-study to visit Mongolia, we have found a serious environmental problems there, which is the Air Pollution and the Water Pollution. It is mainly caused by the Mongolian rapid economic growth. This situation looks like something the same as that of Japan in 1950s and 1960s. The fact which shocked us the most is that people living there don't care much about the serious situation even though they have already noticed it. This is the reason why we have started the cooperative research project with the students of Shin Mongol High School.

The aim of the project is to know the realities and to find out some solutions which high school students can do by themselves through the fieldwork in Mongolia and the discussion on TV conference with Mongolian students.

**2. Methods and Results**

1) Water quality investigation

We investigated the Water quality — The ponds of Nagoya university, the upper reaches and the lower reaches of the Tuul River in Mongolia in summer.

2) Atmospheric investigation

We investigated the Atmosphere — The courtyard of our high school, the rural area of Mongolia, the urban area of Mongolia in summer.

( In Japan )

( In Mongolia )



3) Analyze the results of the investigation

3-1 Discussion with the students of Shin Mongol High School on TV conference

3-2 Discussion with the students of Mongol National University

3-3 Discussion with the professors of Nagoya University Field Research Center (FRC) in Mongolia

3-4 Discussion with the staff of Mongolian Embassy

3-5 Discussion with the staff of JICA of Mongolia

4) Results

From the data we have piled up for 4 years, we could find the differences of measured figure between Japan and Mongolia. But the differences are so small because all the data was taken in summer when we can visit Mongolia. According to our interview to the Mongolian people, the air pollution in winter is terrible because of the smoke which is produced from the fireplace in gers especially in the ger area where modern infrastructure has not been prepared. So we decided to take data properly in winter next year by the support of the students in Shin Mongol High School.

**3. Conclusion**

1) Environmental Education

2) Spread the SDGs

3) Take action together

# What Should We Do to Improve Japanese Education?

## A Comparative Study with Current Situations in Other Asian Countries

2721: Aichi Prefectural Jishukan High School

Key words: PISA2015, Singapore, PSLE, Taiwan, educational background, think on *one's* own

### 1. Introduction

I want to be a teacher in the future and have decided to think about the future of Japanese education in my research project. Since education is universal in terms of its aim but the environment is totally different from country to country, I have paid attention to educational circumstances seen in other countries. Especially I have focused on Asian countries, whose academic abilities are said to be above that of Japan. I would like to find out the ways to improve Japanese education through this study.

### 2. Methods and Results

I investigated PISA2015, an international academic survey. It shows that 15-year-old students in Singapore and Taiwan were excellent in academic ability in 2015. I wondered why such a result have come out.

First, I looked into educational circumstances in Singapore, whose students were the best scholars in PISA2015. Singapore has a multicultural society, so the students learn various ways of thinking. The students who do well can also be given an important, well-paid job such as public and police officers instead of scholarships. It means that such students can earn a lot of money in the future. What is more, people in Singapore determines what they will do in the future when they are young. The elementary schools adopt a graduation exam called PSLE, which determines whether the students can go on to university.

After that, I focused on the situation in Taiwan. Many students there go on to university: 97% of children do it, while only 63% in Japan. Educational background is important in Taiwan, and students who win fierce competitive examinations are regarded active in the world. One more interesting feature is that schools in Taiwan introduce a nap time. Students can take a nap after they finish their lunch, and they can get refreshed, organize their memory, and rest their brains.

I will also discuss this topic with students from other countries who study at Toyohashi University of Technology.

### 3. Conclusion

My analysis is that students in these countries are good at thinking on their own. On the contrary, Japanese students are said not. It should be necessary for schools in Japan to provide the students with the opportunities to think by themselves. I also think that adults around the students should not deny them so that they can think and state the ideas freely. Educational settings in Japan will improve if the students are allowed to have various opinions and the opinions are approved by people around them.

I have described what I will be able to do as a teacher, but this is just the beginning when I consider my future course. I would like to keep investigating educational situations all over the world and to deepen my thoughts on future Japanese education.

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# Potential for a prevalence of Hydrogen fuel cell vehicles and its issues to be solved

2722: Chubu University Haruhigaoka High School

Key words: Hydrogen Fuel Cell Vehicle

## 1. Introduction

The theme of our research is to study the potential for the prevalence of Hydrogen fuel cell vehicles, which could be an effective solution for global warming or a decline in fossil fuels.

## 2. Methods and Results

We considered the issue based on the following 4 points; whether or not performance meets current demands, whether or not the number of refueling stations can be sufficient in the future, whether or not non-CO<sub>2</sub> producing technologies will come into existence, and whether or not we can make the price low enough for vehicles to be used widely in society.

In the section of the first point, we compared the gasoline car and Hydrogen fuel cell vehicle at the sight of running ability of each other by using four indicators. As the estimation of this section, Hydrogen fuel cell vehicle is still inferior to gasoline car, especially its “cost performances”, and so hard to say it meets the demand. Next, in the section of the second point, we use some hypotheses, and referred the current number of filling station of gasoline in Japan. As the estimation of this section, we found it hard to reach the goal because of the needing of massive amount of money. In the section of the third point, we searched for non-CO<sub>2</sub> producing technology against the current technologies. As a result, more than one methods were found. As the estimation of this section, there is a non-CO<sub>2</sub> producing technology which generates hydrogen and it is almost ready to be used. Lastly, in the section of the fourth point, we searched for methods of reduction in price of Hydrogen fuel cell vehicle. As the estimation of this section, a subsidy system called CEV-subsidy was found. However, it was not effective to make the price low enough.

## 3. Conclusion

Considering all the research points above, we found that economic problems are still remained while technological problems are almost completely solved for the prevalence of Hydrogen fuel cell vehicles. We present two solutions for this. They are “reinforcement of subsidies produced by the government or municipalities” and “price reduction of equipment construction”.

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# Ways for small and medium-sized businesses (SMBs) to recruit new employees

## How can we interest young people in working for SMBs in Kyoto?

2723: Kyoto Prefectural Toba High School

Key words: small and medium-sized businesses, employee recruitment, economic development

### 1. Introduction

The continued healthy growth of small and medium-sized businesses (SMBs) is essential for the economy, especially in Japan. SMBs account for 99.7% of all companies in Japan, one of the highest percentages among member nations of the Organisation for Economic Co-operation and Development (OECD). Since SMBs are such a large component of the Japanese economy, it is extremely important to keep them vital. In this research project, we investigated a key problem facing SMBs in Japan: how to recruit enough qualified employees.

### 2. Methods and Results

We began by looking at the current situation of SMBs in Japan. According to a survey done by the Organization for Small & Medium Enterprises and Regional Innovation, 73.7% of SMBs are facing a lack of qualified employees, and about 20% are facing a “very serious” shortage. As a result, the work-load of each employee is increasing, causing physical and mental stress. This may result in poorer quality work, which in turn causes declining sales. SMBs caught in this negative feedback loop may end up going out of business.

As part of our research, we did interviews of the managers of SMBs in Kyoto and the staff at JETRO in Shanghai. We asked them what kind of employees they were hoping to recruit. They said that the most important qualities are problem-solving abilities, communication skills, and the ability to accurately assess the current situation, and talked about the difficulty of finding such employees. Furthermore, they mentioned some of the benefits of working for SMBs, including closer relationships, and better communication between managers and workers.

Next, we investigated the employment preferences of graduating students. Sunday Mainichi magazine found that graduates from top universities in the Kansai area tend to prefer working for large, well-known corporations. However, a survey by the human resources corporation MyNavi, found that 54.1% of private university students in the Kansai area are open to working for SMBs. Moreover, compared to the Kanto area, more of these students (32.8%) said they wanted to “enjoy working” and that a “work-life balance” is important to them (27.5%). The Kansai area has many private universities, so such students are an ideal recruitment target for SMBs in Kyoto. Unfortunately, compared to large companies, SMBs also tend to have little appeal for students in terms of salary or benefits, and they are not well-known.

### 3. Conclusion

While students at top universities want to work at large, well-known corporations, many students at private universities in Kansai are open to working at SMBs. These students are an ideal recruitment target for SMBs in Kyoto. We suggest that one cost-effective way to appeal to such students is to use advertising on YouTube, which can direct students to the recruitment page of the Kyoto Association of Small and Medium-sized Enterprises. These ads should focus on the benefits of working for SMBs, such as closer relationships and better communication. We believe that this can be one effective solution to the problem of how SMBs can recruit qualified employees.

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### Awards

None



## Problem of Japanese emergency medical treatment system and suggestion to reform present situation --Accurate use of ambulances helps people's lives--

2724: Kyoto Municipal Saikyo Senior High School

Key words: Ambulance, Emergency medical system, Recognition, Labor shortage

### 1. Introduction

In Japan, we don't need to pay for ambulance services. We can able to call them easily, if we do not have enough money. If you look at other countries, you can find that it is rare to take any money when administering emergency medical treatment. However, when we went to Vietnam for our field work, we were asked about the true situation that there. They must pay money to use ambulance services. As for America, you are required to pay about ¥45,900 in Los Angeles or about ¥27,000 in New York to use it. In Japan, the growing demand for ambulance services has reopened a discussion of charging people a fee for its use, an issue that has been under consideration for about 10 years. Therefore, we cannot think of the Japanese system today as being is conscientious for all the nations and sweepingly say that being charge for use is a bad thing. It is not only an issue for Japan. This is an issue for all countries. Our end goal is to spread proper and concrete awareness regarding regulations when using emergency medical services. Also, we aim to promote the primary use of these services in dealing with people in serious or fatal conditions by overcoming the issue of today's emergency medical system.

### 2. Methods and Results

We asked people from the fire station, "Why does the government consider charging people for ambulance use?" to Fire. In addition, we have gathered data which experts of these fields wrote, and the government issued. From these, we could understand that there is a serious problem about working in emergency medical services sector of understaffed technicians. The Ministry of Internal Affairs and Communications are also referring to labor shortage at material for coverage; the number of technicians is decreasing within the last five years despite an intense increase of rescue operation requests and calls. Judging from Red Cross' website, there are three stages to distinguish the gravity of a patient's state or the facility of the emergency. In the first stages, patients in mild cases will be treated comparatively. These people are demanded to go to their family doctor, and not call an ambulance. The second stage is prepared for patients who should have an operation or stay in hospital. The third stages are for people who are in serious or fatal condition. Ambulance services exist for the last two stages. However, it seemed that many the nations do not comply to it. The Ministry of Internal Affairs and Communications' material for coverage are also supporting it. Following this material, although 5,621,218 people were transported, 2,769,201 of them had been diagnosed to be under the first stage category. In other words, 49.3% of them didn't need to use an ambulance. Despite 45% of patients are in the second or third stages, they went to the hospital by not using ambulance services. More people who are in the first stage were using the ambulance. Besides that, the time it takes to transport patients is increasing almost every year. We examined these problems and think that these may be some of the reasons why the government is considering charging emergency ambulance and medical services.

### 3. Conclusion

The nations are not understanding the proper way of using ambulance services is the problem in the first place. And it is difficult to remain gratuitous to provide emergency medical treatment because it might relate to a decline of it. What we need is awareness of how to use appropriative emergency medical services. Also, we concluded that it is rightful charge people ambulance services. Therefore, our conclusion is we should pay for ambulance services except when we are in the serious or fatal situation.

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## Schemes For Increasing Youth Voter Turnout Learned From Sweden Make High School Students Ask "Ok, Google. Tell Me About Japanese Politics."

2725: Kyoto Gakuen High School

Key words: voter turnout, political parties, embassy, politicians, youth association

### 1. Introduction

With decreasing birthrate and aging of the population, Japan has more elderly people than young people. If the voting rate of teenagers and those in their twenties keeps decreasing, Japanese political parties are more likely to favor policies which benefit elderly people, burdening the youth to win more seats. Moreover, the opinions of the younger generation will not be reflected into our society. To avoid this, more young people should be interested in Japanese politics and express their needs by voting. In our presentation, we will show our findings about the voter turnout rate issue of Japanese youth, and we are also going to suggest solutions while comparing with Swedish.

### 2. Methods and Results

To increase the voting rate of young Japanese, we examined the issue of what makes younger people not go to vote and made comparisons to a country that has a high voting rate--Sweden. To reach the root of the issue, we primarily analyzed information which is presented by the Japanese government, and we conducted a questionnaire about impressions of political voting with grade 12 students and teachers in our high school to hear the beliefs of the youth directly. In addition, we contacted the embassy of Sweden to find out why Sweden is able to maintain the high youth voting rate. As a result of our research, we learned that our government insists that Japanese youth are not interested in politics and elections, and our survey supports it. Moreover, a comparison of education systems between Sweden and Japan led us to believe that Japanese education and social systems fail to raise interest in society among youth, which in turn makes the voter turnout rate of Japanese young people decrease.

### 3. Conclusion

In conclusion, we propose short-term and long-term solutions to address the issues at its source. First of all, as short-term solutions, we will utilize social and mass media, and devise programs and campaigns aimed at promoting interest among young people. For example, creating an official application that allows people to easily contact representatives to argue and give ideas from a citizen's view, and setting up a youth organization under each political party. Next, for the long-term solutions, it is necessary to change our education system so as to make children think and act on their own initiative rather than following rules dictated by the school authorities. Rules deprive students of the important sense of self-responsibility. In addition, having classes about politics and mock elections should be popularized in schools, so that more curiosity about politics is cultivated in students. Moreover, by expanding the political activities of youth organizations such as the Democratic Youth League of Japan, young people can get more opportunities to think about politics.

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## Innovative Student Program focusing on Globalization and Sustainable Societies

2726 Doshisha International High School

Key words: global issues; environmental policies; international organizations; critical thinking;

“Hygge” (Danish word meaning quality of coziness and comfortable conviviality)

### 1. Introduction

A large body of the students at Doshisha International High School (DIHS) have experience living in foreign countries. DIHS students understand that environmental issues are global and humanity must cooperate internationally to overcome them. By drawing on our diversity and knowledge, the students of DIHS exchanged their opinions and created efficient solutions to environmental issues.

### 2. Methods and Results

In the first year Global Understanding Skills (GUS) Basic class, we gained basic knowledge about global issues from SDGs and focused on studying on environmental issues. In addition, we researched examples of environmental policies such as transportation, wastes and renewable energy currently used in Germany and Japan. We compared differences of environmental policies between German and Japanese governments. We also participated in active learning lessons in which students developed solutions related to waste problems at DIHS.

During the second year GUS class, we gained profound knowledge of German government environmental measures through our investigations. We also researched how Japan is managing environmental issues compared to Germany's approach. At the end of year, we published a book, Our map towards the future inspired by Germany and research from SGH students (SGH 校生が調べたドイツ流環境理想図). This inclusive book contains information related to German history, geography and environmental measures. During our spring break, we visited Germany and Denmark as a part of our GUS program to see environmental measures with our own eyes. After coming back to Japan, we shared our experiences and new knowledge with DIHS students through various academic presentations.

In the third and final year of the GUS program, we further advanced our knowledge related to global environmental issues through critical thought assignments such as report writing, presentations, lectures and fieldwork in European countries. We received a lecture from the Organization for Economic Co-operation and Development (OECD), an international organization with 36 member countries. Through that lecture, we learned about OECD's ongoing projects and contemplated how governments and businesses, might implement similar programs. Using the knowledge from the OECD lecture's, Kyoto city and Kyotanabe city helped us create solutions to environmental issues in our daily lives. In fact, we decided to make an effort to decrease the amount of plastic boxes used by our school cafeteria. Our idea is to change the current plastic containers to paper and introduce a refill system for plastic bottles. DIHS students proposed their ideas to the company managing our cafeteria, but faced setbacks related to cost-benefit balances, company's rules, a big gap of attitudes towards environmental issues and sustainability. We will continue to work together to find a reasonable solution.

### 3. Conclusion

Throughout the GUS program, students at DIHS became conscious of the complexity of environmental issues and globalization. The skills DIHS students have gained from this program will not be wasted. We will wide our global perspective and change current environmental issues connected to our daily lives and everyone's future.

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## **Asian garbage problem becoming serious by waste plastics**

### **~Reduction of waste by reviewing Japanese garbage processing system~**

Hirano Senior High School Attached to Osaka Kyoiku University

Key words: waste plastics, Asia, garbage, Japanese processing system, recycling, classification,

#### **1. Introduction**

Waste plastics from all over the world, that China had imported until now, have streamed to countries of Southeast Asia because of regulations which China invoked on December 2017 not to import waste plastics. Following it, various countries in Southeast Asia have been taking measures so that they stop importing waste plastics. That influenced some countries such as America, England, and Japan. There are filled with waste plastics that cannot be processed or exported to countries in South Asia. Now that it is also too serious to ignore the influence on the environment by waste plastics. And regulations by various countries in Southeast Asia aren't the best because it would repeat the cycle. If a country regulates imported waste plastics, it must be streamed to another country and then yet another country would regulate and import it. Its current status should be worked out. Therefore we must consider the way to solve these problems.

We suggest two methods. 1. Tell the general people that it is serious to impose waste plastics on foreign countries in Southeast Asia. 2. Improve the garbage processing system in Japan.

#### **2. Methods and Results**

We perform two methods for the two purposes above.

1. Make a leaflet to tell people about how the current status is serious and raise awareness of recycling.  
Mention the method of classification, the status of Southeast Asia in the leaflet.
2. Tell the current status of garbage disposal and suggest that they improve it to the government, and suggest to the Osaka prefectural government that they unify the classification system.

#### **3. Conclusion**

Performing the two methods above, we improve the garbage processing system by three groups: general people, the government, and Osaka prefecture. It can reduce the waste plastics that is not processed by appropriate methods in Japan and make space that can process the waste plastics exported to countries in Southeast Asia. Therefore the dependence of garbage processing by exportation would decrease which connects with solving the garbage problem in Southeast Asia. We'd like to perform the methods which we considered in the whole country if they are proof that they are effective ways.

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# Halal business's development in Japan

2728: Osaka Prefectural Toyonaka High School

Key words: Halal business, Food, Halal Certification System, Muslims

## 1. Introduction

When companies join the Halal business, it requires a large amount of time and cost to get Halal certification. In addition, there are some examples that Japanese companies are involved in problems concerning halal, so it is difficult for them to join the Halal business. We will show some solutions to the companies in order that they can easily join the Halal business and achieve profits. Also, we would like to meet the demands of Muslims who visit Japan.

## 2. Methods and Results

We took a survey on how well Local halal certification is known to Muslims and showed the profit and advantages of joining the Halal business to the companies. We will suggest some business models to them. According to the results of the questionnaire, Muslims know Local Halal certification better and feel safer to buy a product with Local Halal certification than we expected.

## 3. Conclusion

It can be said that Muslims feel safe to buy a product which has only Local Halal certification. In addition, souvenirs which are mainly sold in the domestic market only need Local certification. We will sell Japanese confections with Local Halal certification to Muslims who visit Japan to get a toehold in the market and increase profits. We will make this suggestion to famous Japanese confection companies.

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## Awards

# Poverty and Street Children in Mongolia - High Quality Education for All

2729 Osaka Prefectural Nose Senior High School

Mongolia, street children, poverty, education

## 1. Introduction

This study aims to make a research on poverty in children in Mongolia and suggest what we can do to help those children get out of poverty. About fifteen years ago, our school happened to have a student from Mongolia, and we learned that there were children suffering from poverty in Mongolia. Then we started to give aid to those children through an NGO in Ulaanbaatar, the capital of Mongolia, and have been doing activities to support them. In August of 2018, we visited Ulaanbaatar to make a research on the NGOs which are tackling the children's poverty. The NGOs we visited are; TCDC (Tolgoito Community Development Center), SCJ (Save the Children Japan in Mongolia), and ML (Magic Land).

## 2. Methods and Results

When we visited each NGO, firstly we gave a presentation of our project to the staff so that we can convey our intention of visiting them. Then, we interviewed them and asked questions, and took videos to make a good record of the interview. TCDC is conducting local children's support activities in the poor section of the district. We had a chance to do an internship at a summer camp for those children organized by TCDC, and it was a good opportunity to learn about their actual activities. SCJ is carrying out a program which delivers textbooks and school supplies which are packed in boxes to support the children who don't have educational opportunities. ML was founded a few years ago in an impoverished site and is sheltering children who need salvation from abuse. They are also providing opportunities of education for the children in need in that area.

## 3. conclusion

Through the interviews, we found that the most important factor for solving the problems of children's poverty is education. To ensure every child in Mongolia a good education, we should do our best to develop the educational environment. Education is a key for children to break out of the negative chain of poverty.

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## Which Dress Would You Buy?

### Actions Taken for the Abolition of Child Labor in India and Cambodia

2730 Osaka Prefectural Senri Senior High School

Key words: Child Labor, Apparel Industry, Human Rights, India, Cambodia

#### 1. Introduction

As of 2016, 64 million girls and 88 boys- about one in ten children in the world- are in child labor. By 2016, the number of children in child labor had decreased about 40% compared to the number in 1976. However, there are still many. One of the sectors they work in is the apparel industry. It is a globalized industry, and the clothes we buy in Japan also contributes to this problem.

#### 2. Methods and Results

From articles on child labor issued by international NGOs for human rights, we found the US government and ILO have taken actions to solve child labor problem. We started our research tracing these actions.

In July 2010, the US Department of Labor published a report on what goods are produced by child labor. This report includes facts on products for apparel industry. After this report was published, in November that year, the apparel industry of India concluded an agreement with US Department of Labor. They accepted the advice about reducing child labor and guidelines on labor practices.

In 2013 and 2014, Human Rights Watch interviewed workers in Cambodia's garment factories. It revealed children being paid less than the minimum wage and having no access to education. Following their report, Better Factories Cambodia, an ILO program, and the Garment Manufacturers' Association in Cambodia signed an agreement allowing workers under 15 to be given an access to vocational training institutes and to be paid wages matching the average wage of Cambodian factory workers in December 2014.

The US government has made actions to stop child labor, and encouraged consumers to do something to solve this problem. In 2016, the US former President Obama revised a law concerning child labor. The new law says that they do not import products made by child labour under any conditions. Also in the same year, the US government released an application for smartphones that shows what consumers can do to decrease child labor.

#### 3. Conclusion

In the future, we plan to follow up our research in three areas. First, about whether other countries are acting like US by banning the import of products made by forced or child labor. Second, about the effect of actions taken in Cambodia and India. Third, about what consumers in Japan can do to solve the problem of child labor.

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## The possibility of Pet Shops which don't sell cats and dogs.

2731

Osaka prefectural Semboku High School

Japanese Pet industries · Animal welfare

### 【Introduction】

Today's Japanese Pet industries that we can get cats and dogs easily, must change.

Cats and dogs are priced and ownership of life are sold is very far away from the goal "lifestyles in harmony with nature" in SDGs's 196 targets.

We thought that these actions producing many "an abandoned cats and dogs" and "killed cats and dogs".

### 【Methods and Results】

Methods

- Interview to the Pet Shop which doesn't sell cats and dogs , a pet shelter and an animal protection center.
- We took questionnaires about 8 countries from 10 people in Semboku High School.

Results

From various investigation results, people sense that they feel the necessity of the change of the present situation, and we have gathered some concrete evidence that can apply to the change.

### 【Conclusion】

Today, pet shops are the main method to obtain pets. But, if this doesn't change, the new lives will be bred for the profit and expansion of the business, and those cats and dogs whose owners can't be found would be sent to animal protection center and other institutions.

So we propose that the pet industry should do businesses that do not sell pets.

The precedent case is mainly for rescued cats and dogs, and management is established without selling pets.

We thought that rescued cats and dogs would be familiar to us at all even if this business model got spread.

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chouchou『ペットを売らないペットショップ・シュシュ』



# The Ideal Way to Structure Multipurpose Shelters in Bangladesh Combination with On-Site Generation

2732: Senri International School of Kwansei Gakuin

Key words: Bangladesh, shelter, developing country, on-site generation, natural disaster

## 1. Introduction

Based on my experience of interviewing Mr. Onishi from JICA, I learned that people in Bangladesh have different perspectives towards natural disasters compared to Japanese people because people in Bangladesh do not completely try to avoid the natural disaster, but they rather try to get along with it. (Y. Onishi, personal communication, July 14, 2017). Also despite the fact that Bangladesh is a country with high annual rainfall which experiences many natural disasters caused by rain including cyclones and flooding especially during the country's rainy season, they lack the money to construct emergency shelters. So the main focus of this research is to verify the availability of ideal forms of multipurpose shelter which could be used both in times of emergency and in daily.

## 2. Methods and Results

This research is based on information and data drawn from the resources on the articles, websites, and books dealing with foreign aids and disaster management. This indicates that death rates in Bangladesh during cyclones and flooding disasters are directly related to the availability of shelters.(内閣府.N.D.). In Japan, schools are commonly used as disaster shelters, but Bangladesh does not have sufficient educational facilities, especially in rural areas. Therefore Bangladesh cannot simply increase shelters by utilizing schools. Additionally, 34% of rural area lack electrification, compared to 1% in the cities.(JICA. 2016). So, a sustainable solution must combine increased shelters and on-site electrical generation; this would benefit everybody in rural Bangladesh. Increasing the number of multipurpose evacuation shelters is an essential part of any comprehensive solution for disaster management in rural Bangladesh.

## 3. Conclusion

The research question is: “based on different background contexts of each region, what is the ideal form of multipurpose shelters in rural Bangladesh?”, and the answer to that is establishing shelters with on-site generation of solar power to provide safe protection and offer enough electricity to households, which would enable people to use electricity at low cost in their daily lives and to seek shelter in the case of a natural disaster. Also project finance could be a way of raising funds for building shelters because it is a system of borrowing money to use for the specific activity. There are benefits that borrowers can expect a large-scale of fundraising and there is no requirement of payment when having arrears. This would enable autonomy in Bangladesh by making profit from selling electricity and repaying loans. For further research, there is high necessity of investigating the feasibility of project finance and a way of acquiring expertise to fully consider the feasibility of this idea.

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## Prepare “Today” not “tomorrow.”

2733: Kansai Soka Senior High School

Key words:

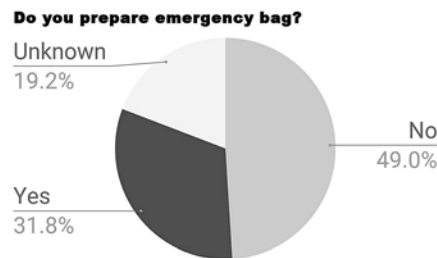
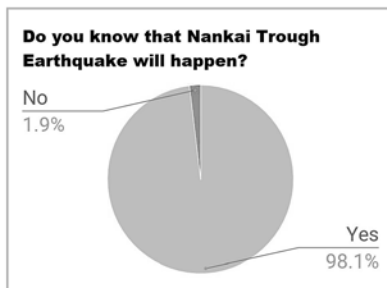
Tsunami, earthquake, disaster prevention, raising awareness, “Namazun”, social media

### 1. Introduction

Tsunami and earthquake are not only domestic problems. Countries all over the world need to be united to solve the problems caused by these natural disasters. Taking the opportunity to participate in the “High School Students Islands Summit on ‘World Tsunami Awareness Day’ 2017 in Okinawa,” we started research about disaster prevention and awareness at school. Based on the result of research, we created and implemented some action plans, which received a lot of responses from students and teachers in our school.

### 2. Methods and Results

In order to research about awareness of disaster risk management, we took a survey from students and teachers (in total 675 respondents) at school. The survey consists of 15 questions related to disaster prevention, such as “Do you know that Nankai Trough Earthquake will happen?” “Have you prepared earthquake emergency bag?” “Do you know the meaning of ‘Tsunami tendenko’?” The result of the survey shows that 98% of the students and teachers know about Nankai Trough earthquake that may occur in near future. However, only 49% of the respondents have prepared emergency bags and only 10% know the meaning of tsunami tendenko.



In reviewing the result of our survey, we felt a sense of danger that most of people do not have sufficient knowledge about earthquake and tsunami, and have not prepared for them although they knew the possibility of upcoming earthquake. In response to this result, we have decided to develop a campaign called “Prepare today not tomorrow” in order to raise awareness of disaster risk management at school. At the beginning of the campaign, we designed a symbol character called “Namazun,” which models after a catfish (catfish is namazu in Japanese) because catfish are known in Japanese folk belief to foresee upcoming earthquake. In addition, we promoted important information related to disaster prevention through handmade four-panel cartoons posted on the wall of restrooms and cafeteria in our school as well as life hack videos shown to all students at the school events and social medias. The video was uploaded to the school’s youtube account. (<https://youtu.be/1i1aTJdxGPw>) (<https://youtu.be/VfEFb2fVusQ>)

### 3. Conclusion

Through our experience in the Summit and our campaign, we can confidently say that we have brought a change to people’s disaster awareness. The earthquake which occurred in Osaka on June 18th this year was a typical example of the change. On that day, an earthquake occurred at 7:58 in the morning. Many students were on their way to school and they were not able to arrive due to the suspension of train operation. Teachers and parents could not get in touch and were worried about students. Nobody expected that an earthquake would occur and would actually experience the damage. The sudden disaster made them feel anxious and insecure. However, they made use of the information they learned through our campaign during and after the earthquake and strongly felt how important it is to prepare “today” not tomorrow. We were able to sense the significance of our campaign and need for even more actions to raise awareness in society. Though we cannot change disasters, we can change our actions. We will continue spreading our movement hoping that the youth unite and become the leading voice to protect our own life and our loved ones’.

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みんなの防災ハンドブック  
防災マニュアルブック

### Awards

## How do we live? Manpower in 20 years

2734: Seifu Nankai High School

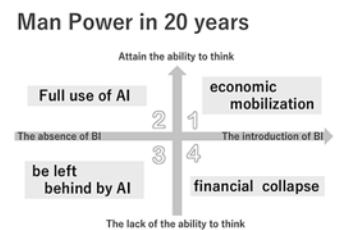
Key words: Manpower, AI, Society 5.0., Scenario Planning(SP)

### 1. Introduction

It is certain that AI will spread all over the world in 20 years, which will surely change our working environment. According to the study by Dr. Osborn, many jobs are susceptible to computerization. In addition, the Japanese government is trying to realize Society 5.0., which aims at the cooperation between humans and technology. Since we are going to become a major workforce in 20 years, we think it is important and meaningful to predict what our society will be like in 20 years and what we should do to make the most of Manpower through Scenario Planning (SP), which is a business method for future prediction.

### 2. Methods and Results

We thought about the future situation regarding Manpower, by utilizing SP. First, we brainstormed and enumerated driving forces that might affect the topic. Not only thinking for ourselves, but we brainstormed with students in Australia, where we visited as a field trip. We learned many ideas and perspectives from them. From these driving forces, we selected two factors that would have the greatest uncertainty and the strongest impact. Based on these two axes, we made a scenario in each quadrant. We selected, “whether people in society attain the ability to think logically and critically among other ways” as the vertical axis, and “the introduction of Basic Income” as the horizontal axis. We made a scenario in each quadrant, and to think more specifically, we considered how influential Basic Income could be to our lives, because its influence is closely related to our actual income. In the first quadrant, the scenario title is “Economic Mobilization.” The scenario in the second quadrant is named “Full use of AI”. The third one is “Being left behind by AI,” and the final one is “Financial collapse in Japanese society”.



### 3. Conclusion

We could depict the future by Scenario Planning. If we look carefully at signs which will lead to the undesirable scenarios, we can avert those scenarios. If we can make predictions about which scenario will be realized in the future, we can prepare and think about appropriate measures. Through doing this Scenario Planning, we practiced to thinking logically. We believe that we can avert undesirable scenarios. For our graduate work, we will write a paper, which will provide much more detail.

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# Studies in Thinking Process of General Japanese Students and Returnee Students from English-Speaking Countries Can We Train Thinking Process?

2735: Kobe University Secondary School

Key words: thinking process, English as second language, English learning, returnee students

## 1. Introduction

What is the difference in thinking processes between general Japanese students who have learned English as a foreign language and returnee students from English-speaking countries who have acquired English as a second language? As a returnee student myself, I have noticed that there are some crucial differences between general Japanese students and returnee students when communicating. It seems that these differences arise from not just the factors like knowledge in vocabulary, grammar, or pronunciation but from the thinking process.

In this research, the differences are demonstrated. Furthermore, suggestions for English education in Japan are made.

## 2. Methods and Results

A questionnaire was conducted on seventy eight general Japanese students (group G) and twenty six returnee students (group R). In the questionnaire, the English learning backgrounds such as experiences overseas and the age when they started studying English are asked. Moreover, which language, Japanese or English, they would use to answer an English question; for example, "Which country do you want to visit now?"

Nearly seventy percent of the answers by students in group G indicated that they used Japanese to answer in English, i.e. they translated the English question into Japanese and then made the answer in Japanese and translated it into English. However, there are some students who are presumed to think in English in group G, too. While all the students in group R think in English with no medium of Japanese when answering the English question.

## 3. Conclusion

In conclusion, it is assumed that general students take more time to answer English questions because they have to translate their Japanese answer to English. Additionally, comparing group G and R, group G thought of the answer in Japanese and group R thought in English. Thus, it is suggested that lessons where students can train their thinking process should be included for a secondary education in Japan.

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# Identity Education of Japanese-Brazilian Children

2736 : Hyogo Prefecture Hyogo High School

Key words: Japanese-Brazilian, identity

## 1. Introduction

In 2017, Hyogo prefecture had 3,058 children who were born in foreign countries. Also, Kobe City had 47,704 immigrants and their children and 401 Brazilians as of September 2018.

The purpose of this research is to use identity education to solve societal problems for Japanese-Brazilian children.

## 2. Methods and Results

The research methods were reading papers about identity education and visiting the Brazilian Community of Kansai and interviewing members of the facility. I also went to the UK for a school training trip. I could learn about education there.

Many papers say native language education helps to shape identity. I visited the Brazilian Community of Kansai twice. The first time, I joined the Brazilian festival. Many children dance traditional Brazilian dances and talked Portuguese and Japanese. I interviewed Ms. Marina Matsubara at that time. She is a third-generation Japanese-Brazilian. She said that she was worried about her own identity. She didn't understand which her identity was "Brazilian" or "Japanese". The second time, I joined the Brazilian and Japanese folktales recital. Children played three folktales and danced. They performed in both Portuguese and Japanese.

## 3. Conclusion

I think native language Portuguese education is good for Japanese-Brazilian children. However, it's difficult to tell them the importance of leaning about it. There is difference in recognition of native language between parents and children. I suggest that Japanese-Brazilian children should be taught their family language, Portuguese, but it's essential to teach to them the importance of speaking their traditional language while they are young.

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## Sleep Debt in New York and in Japan

### Survey research about high school students' quality of sleep.

2737 Hyogo Prefectural Itami High School

Key words : sleep debt, quality of sleep, high school students,

#### 1. Introduction

About 40% of adults lack sleep in Japan. Due to this, there is an economic loss of about 15 trillion yen in a year. It seems caused by a decrease in work efficiency, that is, an increase in mistakes due to fatigue and stress. It also seems to make it more difficult for an economy to catch up with other countries' economies. Due to this, people must work harder and feel more stressed.

High school students need good sleep because the quality of sleep affects their cognitive ability, memory and concentration. Further, the ability to control feelings also declines. It affects their study and can be a cause of irritation and bullying. Therefore, physical and mental health are influenced by sleep.

#### 2. Methods and Results

Research about insomnia's causes, symptoms, and solutions was conducted on the internet. In fieldwork in New York, a questionnaire was given to high school students and they also did a tasting of jujube which has positive effects for sleep. Pharmacies were also visited to research about what products are sold and which products are popular. The questionnaire shows the percentage of high school students who have sleep trouble in NY is about two times higher than that of Japan and also shows that the percentage of New York students with a difference of 1.5 hours or more between weekday sleeping hours and weekend sleeping time hours is a third higher than that of Japan.

#### 3. Conclusion

From these results, New York students' quality of sleep is more serious than that of Japan. As a solution, Chinese medicines and eating foods good for sleep will be successful because they don't have side effects and they can be bought in shops in Manhattan. From now on, to have students use Chinese medicines, they should be known more detail. In addition, make foods good for sleep easy to eat. Finally, the research about the way to increase the quality of sleep itself should be conducted because it is not enough to improve insomnia to increase the quality of sleep.

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## Thai youths' attitude toward working in Japan

### —From the results of interviews of high school and college students in Thailand—

2738 Hyogo Prefectural International High School

Thai, technical intern trainee, immigration

### Introduction

A previous survey carried out in small and medium-sized business in Himeji revealed that the working environment quality for technical intern trainees from Thailand was quite low. In order to collect additional data to understand this situation, we decided to research the background of the Thai worker in Thai.

### Methods and Results

On November 3<sup>rd</sup>, 2017, we visited to Thai-Nichi Institute of Technology and Maesaiprasitsart School and conducted interviews about working abroad. The interviews consisted of thirteen Thai-Nichi Institute of Technology students and forty Maesaiprasitsart School students. We found 43% of interviews wanted to work abroad, but none knew about the realities of the process involved for working in Japan. We also conducted online survey by using a google form research with Thai students about working in Japan. Fifty-eight students who were aged fifteen to twenty-two participated in this survey. The duration of the survey was from October 12<sup>th</sup>, 2018 to October 26<sup>th</sup>, 2018. From the results, we found that 90% of surveyed students want to work in Japan if certain conditions are met, but various problems such as language are considered obstacles to working in Japan.

### Conclusion

It can be expected that more Thai people in Thailand will come to Japan to work in the future, so the Japanese government should put more effort into providing information on the working environment in Japan.

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## The educational problems and outlook that emerged through Myanmar Study Tour.

2739 Keimei Gakuin Junior and Senior High School

Key words: education, poverty, employment, social business

### 1. Introduction

On August 23 to 30 in 2018, 15 high school students and 3 teachers from Keimei Gakuin High School went on Myanmar Study Tour with cooperation of Dr. Kentaro Hayashi, representative of Non-Profitable Organization Barefoot Doctors Group.

The purpose of this study tour is to find social issues we would face in global community by learning social business run by Japanese in Myanmar and finding issues the country is facing.

During the study tour we also visited Buddhism Sanctuary, Myanmar's cultural heritage and its capital.

### 2. Methods and Results

We researched social issues in following five places to deepen our understanding.

1. Institution for philanthropic work for HIV infected orphan children in Moulmein, southern border to Thailand.
2. Kayikto, holy place for Buddhist
3. Taungoo YMCA
4. Peace Project using Chinese star anise in Taunggyi
5. Naypyidaw, its capital

We interviewed staff working in the institution in 1, the children selling souvenirs in 2, teenagers gathering in YMCA in 3, NPO staff and residents there participating the project in 4, and Naypyidaw.

In Myanmar there are various kinds of social issues such as undeveloped infrastructure, unestablished medical care, gap in education between urban and country area, developing marketing system and lack of employment opportunity and so on.

We concluded that poverty is the root cause of social issues causing such problems.

### 3. Conclusion

We concluded that we should solve poverty that causes many social problems, not fix each problem as they arise. Improvement in education system and creation of new jobs should be forwarded to solve the poverty at the same time.

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N/A



## #YouthPledge in Regards to the Paris Agreement

2740: Tottori Nishi High School

Key words: Paris Agreement, Climate Change, Sustainable City, Youth Pledge, SCoPA

### 1. Introduction

This research is based on SCoPA projects in accordance with the Paris Agreement. The primary purpose of this research is to spread awareness of appropriate actions that teenagers, and also national or local communities, should take to uphold the Paris Agreement.

We focused on four elements in our research: 1) "What policies have been adopted by each country, and are they effective?" 2) "How aware are people of the status quo and environmental problems?" 3) "How can we make a sustainable city through the urban master plan?" and 4) "What actions can younger generations take?"

It is evident that people must not wait for government facilitation; instead, younger generations must take responsibility for making changes that will benefit future societies. It is essential for younger generations to take the initiative in order to meet the 2030 goal set in the Paris Agreement. For these reasons, this research focuses on SCoPA (Students Congress on the Paris Agreement) and the Youth Pledge.

### 2. Methods and Results

After a preliminary survey of the policies implemented by each country, we surveyed people's awareness of the Paris Agreement. Learning about the progress of the policies adopted by each country is crucial to understanding the current situation in Japan. Also, it is necessary to know how aware the local people are of the Paris Agreement. We used a survey to research the extent of awareness in both Japan and the United States and then compared the results of the two countries.

Next, we investigated the effect of climate change in Tottori. Our goal was to determine whether the data indicated by the Paris Agreement is relevant to the situation in Tottori as well. Finally, in order to help build the type of society envisioned in the Paris Agreement, we studied the urban master plan and explored the coexistence between motor vehicles and bicycles in the city center area.

The Japan-US survey showed low awareness of the Paris Agreement. Our research also found global warming, sea level change, and recent extreme weather to be significant effects of climate change in Tottori Prefecture.

Lastly, based on these findings, this research has prompted the creation of a student declaration known as the "Youth Pledge." This pledge includes the resolution of students, which can be put into action immediately and which enables SCoPA actions to be continued and strengthened through students' participation.

### 3. Conclusion

By comparing Japan and the United States, we realized that every country has a significant responsibility to keep working and make further efforts in order to not only reach the goals set in the Paris Agreement but also make a sustainable world. Whether we can accomplish each goal depends on younger generations. They do not have the luxury of waiting until they graduate from their educational fields and enter society; it is crucial for them to start immediately, as students. At this time, their actions should take place at the local level. Our research concerns environmental issues on a global scale, but we should start to make changes in small ways and gradually expand our focus to the international society.

One thing that this research has accomplished is specifying the steps necessary for making ideal conditions (considering global-scale goals) feasible, through student declaration.

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### Awards

- 日本地理学会 2018 年秋季学術大会高校生ポスターセッション理事長賞 (日本語発表)  
 2018 年鳥取西高等学校 SGH ポスターセッション優秀賞及び審査員特別賞 (修正)

## SHOPPING MAP IN NISHINOSHIMA

2741:Oki Dozen High School

Key words: *I-turn* people, shopping map, store, Nishinoshima

### 1. Introduction

We heard *I-turn* people who moved to Ama this year said that there is not much information about stores in Nishinoshima, which makes them difficult to go shopping. So we made a booklet called “shopping map in Nishinoshima”. There are two kinds of it. Because we thought that *I-turn* people aren’t only Japanese people so we decided to make an English version. We have two purposes. First, we introduce information about store in Nishinoshima to *I-turn* people. Second, We want *I-turn* people to go shopping smoothly in Nishinoshima as well and to live comfortable.

### 2. Methods and Result.

- ① We searched place and the number of stores in Nishinoshima.
- ② We went each stores and asked for staffs about their shops.
- ③ We made a booklet.
- ④ We wrote down the information what we learned after making a booklet.
- ⑤ We gave *I-turn* people the booklet, and let them use it.

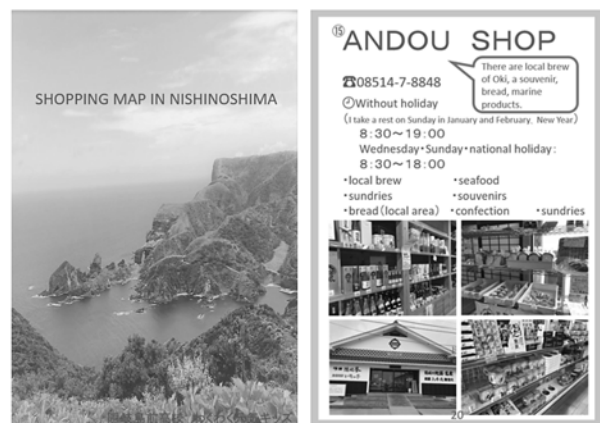
Then, they judged it. (good points or bad points)

- ⑥ We took a correction.
- ⑦ We made an electronic edition.

~Japanese version~



~ English version ~



### 3. Conclusion

We got some further ideas to improve the quality. First, to ask information about stores which *I-turn* people want to visit. Second, to write how much time it will take and the distance from the port to the stores. Third, to put it in many places to be used by many people. Fourth, to make a homepage as digital version. Now, the number of *I-turn* people of Nishinoshima is increasing, so we want them to use it in order to go shopping in Nishinoshima easily and enjoy it. We will be happy if they live a better life in the Dozen area.

# The Possibility of New Bus Lines to Improve Mobility for the Elderly in Okayama

2742: Okayama Prefectural Okayama Sozan High School

Key words: City transportation, Sustainability, Aging mobility, Bus lines

## 1. Introduction

86.8% of Okayama households have at least one car, which is greater than the national average of 73.6%, and makes it by far the most common mode of transportation. In contrast, the number of elderly people who use privately-owned vehicles is low, and according to an Okayama City survey, the largest group of bus users is those over 65. As Okayama is a typical “car society,” and transportation for elderly people are limited, we identify the locations that are difficult to access and consider the possibility of new bus lines.

## 2. Methods and Results

According to research conducted in 2017, elderly people living in an area highly dense in population and buildings find getting around to be relatively easy, and car trips make up a large portion of total transportation. On the other hand, getting around in an area with significant changes in altitude tends to be difficult, and these regional features highly affect such activities as shopping and social interaction. In such an environment where privately-owned vehicles are the main form of regional transportation, the mobility of the elderly is restrained. Assuming cars to be the primary form of transportation, in order to identify the places that are difficult for elderly non-drivers to access and based on data on distribution of the amount of traffic on the main roads in Okayama City and roadside shops, we compare the most common routes and destinations of drivers to city bus lines. As a result, we find the possible roads that could provide easy transportation for the elderly.

## 3. Conclusion

By using a bus line system that provides a higher level of mobility for the elderly, Okayama City can offer transportation to points which previously have been difficult to access for non-drivers, as well as allow drivers the option of switching over to using buses. As a result, we expect an increase in the number of elderly bus passengers along with increased demand for bus services, which will also help to address the excessive number of traffic accidents involving the elderly, and, with this improvement in mobility, help to reduce cases of social isolation and physical deterioration.

## References

## Awards

N/A

## Global Citizenship Education

### What is it and how can we have students in Japan become more involved?

SGH Number: 2743 岡山学芸館高等学校

Key words: Primary school education, International Education, Curriculum Development

#### 1. Introduction

Nowadays, globalization has been advancing across the world and countries are becoming more and more borderless. In most countries, classrooms are considering about all sorts of problems through Global Citizenship Education (GCE), a form of civic learning that involves students' active participation in projects that address global issues. But it is said however, that these types of classes are just slowly catching on in recent years here in Japan.

#### 2. Methods and Results

We began our research by examining not only the Sustainable Development Goals (SDGs) but how they are being implemented in various classrooms around the world. In particular, we looked at how countries like Australia and England have embraced the principles of global education in their curriculums. We then decided to conduct our GCE lessons around SDG 2, reducing hunger and included food waste as well. Our aim was to have children take voluntary steps towards contributing to a better global society and to be aware of the fact that "we are the members of the world" and, as such, we should ability to take an action to contribute for the world.

As mentioned, our demonstration lesson focused on SDG Goal 2, reducing hunger. We used a variety of quizzes, followed by detailed explanations, to explain to students both the current state of the worlds hunger, followed by hunger issues faced in Japan. At the end of the lesson, we gave time to students to discuss the question, "What can we do for the world?" During the discussion, we were pleased to see that there were an active exchange of opinions and the imminent ideas only by primary school children.

In the post lesson questionnaire results, when asked "Has this lesson made you want to change your behavior?" 96% answered yes. Upon completion of their two week challenge, students made comments such as "I was able to get into a good habit" and "challenging myself wasn't as hard as I thought." Furthermore 87% of the students felt that they could make permanent changes in their daily life. We asked teachers "Do you think you could teach these types of Global Education lessons if you were provided with a curriculum?" Almost 90% of the teachers said yes.

#### 3. Conclusion

Through this research, we've come to realize that opportunities to acquire Global Citizenship Education is lacking for children in Japan. Therefore we came up with a conclusion that it'll be necessary to give children an opportunity to take a specific action. Accordingly we suggest creating a teaching guide, which includes three points of lesson content, what is happening around the world, give a discussion time during the lesson and help out children's action.

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## Japanese student enrollment at foreign universities

### Is it sufficient? – A comparative view

2744

Hiroshima University High School, Fukuyama

KEY WORDS : Study abroad, International student, International comparison

### Introduction

Our society has been more and more globalized, and accordingly many people are thinking the education system should be reformed. The Japanese government wants to encourage young people to study abroad as a solution to the problem, while relatively fewer students actually have wanted to have such opportunities. We analyze the current situation by comparing the number of Japanese enrollment at prestigious universities overseas with that of other Asian superpowers.

### Methods and Results

By analyzing the data from the following points, we have found Japanese students are not very positive about studying abroad.

- (1) The total number of students studying overseas

While the number of Japanese students studying abroad is 54,676, that of Chinese counterparts is 608,400 in 2017.

- (2) The number of students from Japan, China and India studying at the top universities in the world

The right table shows the enrollment at prestigious universities in the academic year 2017-18. Quite a few students from China and India are studying there.

	Japanese	Chinese	Indian
Oxford	110	1299	368
MIT	75	947	368
Yale	44	786	227

- (3) The number of Asian students studying at foreign graduate schools

The graph shows the enrollment at American graduate schools from five Asian countries (China, Japan, Korea, Taiwan, and India).

We can see the most students are from China and India.



### Conclusion

The number of Japanese students studying abroad has been increasing thanks to the financial supports from the government, while that of Chinese or Indian has been increasing more dramatically. Moreover, those countries are making more efforts to send abroad young experts in the fields of science and technology or international politics. The population of Japan is much smaller, so the enrollment from China and India is naturally more in number. If this trend continues, however, Japan's role in the global communities in the future may be very limited. We think it's important to help more Japanese high school students become international-minded. In the further study, we'd like to study this issue more deeply, for example, by surveying high school students' opinions.

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\*The data are from the Ministry of Education, Culture, Sports, Science and Technology (Japan), Institute of International Education (USA), OECD, University of Oxford, Yale University, and Massachusetts Institute of Technology.

## Global education of the students, by the students, for the students

~Proposal by Kenhiro Students~

Hiroshima Prefectural Hiroshima Junior and Senior High School

### **Introduction**

The world is becoming globalized. In Japan, it is necessary to raise people who can play an active role in the global society. Therefore, we have many chances to come into contact with different cultures. To develop global education in Japan, it is necessary to think about which education students want to have. This time, we make an investigation into opinions which Kenhiro students have, then we will propose the education which high school students want now.

In this presentation, “Global education” is defined as “the education to raise students who can talk and share ideas positively with people from different backgrounds.”

### **Current situation**

In our school, we have had various activities to talk with foreign people. For example, when we were first-year students, we talked with foreign students in class. At that time, we could feel the differences of cultures by talking about each country. In addition to this, we had various experiences in the first-year. Then, at the beginning of our second-year, we did “Reflection” activities based on our experiences. On our school trip, we went to Hawaii. Using the “Reflection,” we could talk and share our ideas positively in Hawaii. So, we found that “Reflection” shows us “what we need to do to grow up.”

### **Method**

Students in Kenhiro have found that they need to grow up by reflecting on their experiences. First, we will collect their impressions by doing a questionnaire. Second, we will classify problems and difficulties that they felt in the activities and make sure what students really want to learn. Based on them, we will suggest a new way of global education.

### **Goal**

This suggestion is valuable because it is made by high school students who are being educated now. By suggesting it, we want to tell our needs and add our fresh perspectives to the global education. And also this suggestion will connect to younger generations. Through this research, we hope younger generations to be able to receive a more useful education.

# Issue and countermeasures for regional inbound

## ~For attracting many foreigners to Shimanami Kaido~

2746 : Ehime University Senior High School

Key words: local inbound , Shimanami Kaido

### 1. Introduction

The number of foreigners visiting Japan is increasing rapidly, 20 million in 2015 and approximately 30 million in 2017, which is 1.5 times jump up between two years. Tourist sites for foreigners are gradually changing. Up until now, many foreigners traveled urban areas such as Tokyo and Kyoto but now foreigners who tour regions are increasing. However, in the ranking of "service not good at visiting Japan, correspondence", 6 items out of the top seven items pointed out the problems of communication and response skills in multilingual (3). As a result, a serious issue of rural areas are promoting tourism and multilingual correspondence. The identical problem is occurring in "Shimanami Kaido" which is widely known as a sacred place for cycling. Therefore, in this research, we focused on "Shimanami Kaido" and conducted research aiming to suggest the idea that will develop local inbound.

### 2. Methods and Results

I interviewed foreigners who were visiting Shimanami Kaido. For example, I asked what kinds of service were received at Shimanami Kaido, asked about what kinds of service they would like to have in the future and the level of satisfaction of the present Shimanami sightseeing map. In addition, I asked the local people what kinds of service they are serving. Next, I conducted an anonymous survey on how many local people are positive about the number of foreign tourists are going up and what kind of countermeasures they want. According to the results of the interview and questionnaire, the satisfaction degree of the present Shimanami sightseeing map is low, and there is little environment which foreign tourists can consult freely when they troubled during tours.

### 3. Conclusion

We propose 4 ways to solve the problems clarified by investigation. 1, make a guide map of Shimanami Kaido that will support to increase the number of repeat customers .2, set a volunteer guide. 3, lecture a simple English for the locals .4, promote activities by using SNS.

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## Cycling de Ohenro

2747: Uwajima South Secondary School

Key words: regional revitalization with inbound tourists

### 1. Introduction

When one of our members visited Singapore for fieldwork, he was asked about the Shimanami Kaido Expressway. They told him it was very famous as a cycling course. Recently, Ehime prefecture is committed to cycling business and have a good reputation even among the foreign cyclists. In addition, the Shikoku district prefecture has an ‘Omotenashi culture’ based on hospitality for pilgrims visiting “Shikoku’s eighty-eight sacred places.” Our city Uwajima now has trouble with a sharp population decline. We focused on uniting two attractive tourism resources, cycling and Ohenro, and sought the possibility of developing the local tourism for inbound tourists to revitalize our city.

### 2. Methods and Results

#### (1) Research in books and on the Internet

We researched the necessary length and cost of each means, which is on foot, buses, cars and bicycle, to visit Shikoku’s eighty-eight sacred places. As a result, using cars looked the best of all the means but it is not so easy for foreigners to drive a car in Japan. We realized the advantage of bicycles is that there is no license required.

#### (2) Fieldwork research

We cycled from one temple to another 13 kilometers away. We found riding bicycle was harder than we had expected because of many slopes on the way to there. Meanwhile, we saw a lot of beautiful sights and encountered kind local people through cycling. By the fieldwork research, we realized that we should develop more effective use of bicycle.

#### (3) Interviews with foreigners

We had interviews with foreigners we met. As a result, they seemed to be interested in visiting temples by bicycle. They said they worry about being lost and feel they want to visit other places on the way to the next temple, etc.

### 3. Conclusion

As a result of the research, we propose a free bicycle drop-off system called “Cycling de O-henro.” Under the system, each of the 88 temples has a rental cycle station. There the visitors can be free to borrow a bicycle and drop it off at another station. As 2-(2) showed, using a bicycle only was tiring. If we can combine the good point of such transportation as bicycle, bus, train and on foot, because of its high convenience, we will appeal not only to foreigners but also to the young population who are not yet interested in visiting temples. Ehime has potentially rich tourism resources in each area. Our plan will lighten up and help introduce such local attractions to the world. That’s the best attractive point of “Cycling DE Ohenro”.

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**Awards** N/A



## To make better working environment for you and me

### -Welcoming foreign workers to solve the labor shortage issue in Japan-

2748: Kochi Nishi High School

Foreign worker, technical intern

#### 1. Introduction

In Japan, there has been a labor shortage since 2000. According to the Ministry of Health, labor shortage has an effect on companies. Therefore, they tried to accept technical interns to cover labor force.

There have been problems when accepting technical interns. There are requirements the Japanese government decided on accepting technical interns. However, there were some cases where employers did not meet the requirements, therefore technical interns did not work. That is why labor shortage of Japan is not solved. Although Japan depends on technical interns.

Our hypothesis in this research is “In order to solve labor shortage issue of Japan, Japan should improve the employment law and employ foreign workers.” We think Japan should shift from technical interns to foreign workers. The purpose of technical intern is to bring back Japanese skills to their countries. This purpose is different from the purpose of Japan, which is to acquire stable labor force. This is why we think Japan should hire foreign workers instead.

#### 2. Methods and Results

In this research, we needed to refer to the advantages and disadvantages of employing foreign workers. Therefore, we decided to look into Singapore which is employing foreign workers and has solved labor shortage issue. In Singapore they are employing not only unskilled workers but also high-skilled workers, however in Japan technical interns have been asked to do unskilled labor. In addition, there are shortage of labor force in some work places such as hotels, restaurants and construction sites. For these reasons, we decided to focus on unskilled workers.

As a result, there are 3 advantages for employing foreign workers. First of all, it must be easy to issue working visa. Secondly, Singapore is a multiracial country and they have 4 official languages. Finally, foreign workers can feel relieved after they get employed. For these advantages, Singapore is suitable for foreign workers to get better work place. On the other hand, there is a disadvantage. Foreign workers are bounded by strict employment law. Thus their personal life are limited by the law. We questioned “Are their human rights respected as a person?”

Consequently, we consider 3 disadvantages of employment law in Japan. ①working visa ②language issue ③social security issue.

#### 3. Conclusion

We have to improve law which is accepting foreigners as labors. However, at the same time, we need to think what we can do to respect other cultures. This is our next goal.

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## Sustainable Regional Reactivation With Footpaths from Britain

2749: Fukuoka Prefectural Kurate High School

Key words: ESD

### 1. Introduction

The Chikuho area, which we live in, used to flourish as a coal mine town. However, as the coal industry has been declining, our area has been losing the activity which it once had. With an ever decreasing and aging population, how can we reactivate the area? Are there any ways for the area without enough tourism resources to attract many people not only from Japan but from overseas? After thinking about these issues, we concentrated on “footpaths” from Britain. We have researched how introducing “foot paths” can affect the area.

### 2. Methods and Results

First of all, students learned the basic knowledge of footpaths both in Japan and in Britain. Second, they conducted a research of their local area and made foot path courses. After proposing their courses to the area, they hold a footpath tour there. They verified the effect of the footpath with a questionnaire. Also, with help of the University of Kitakyushu, they conducted fieldwork and discussed with local residents to make courses there. Moreover, with the cooperation of the locals and university students, these courses were improved. Then, students asked foreign people to walk along the courses and complete a questionnaire. (We are conducting another foot paths tour for foreigners next year.)

According to the result of the questionnaires on foreigners, the main positive effects of foot paths are “rediscovery of local attractions” and “interaction between different generations.” Also, in the questionnaire on the students, there are some positive effects such as “studying the local history” and “learning about the social issues.” We can see positive changes in the attitude of the students, the hikers and the local residents toward footpaths.

### 3. Conclusion

According to the result of the questionnaires, most people have positive opinions toward footpaths. They think it is an activity which “anyone” can “freely” participate in “any time,” so we can say it is a “sustainable” approach. Most of locals feel satisfied more than the sense of burden. Local residents now have a lot of chances to independently participate such as study sessions and cleanup activities, and it can be said that there is a sigh of “reactivation.”

In addition, high school students who are involved with foot paths can receive a positive educational effect. Therefore, footpaths can be utilized as an “educational resource” for students.

One of the future issues is that we need to work together with the region and its government to improve our courses. Also, we are examining footpaths as a cross-cultural communication next year. We would like to think about how to improve the environment to invite foreign people to our local area in the coming year.

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# Realizing Sustainable Agriculture

## Our “mini-Farm” Experience

2750 Fukuoka Prefectural Miyako High School

Key words: Sustainable agriculture

### 1. Introduction

In recent years, the lack of available workers in agriculture has become a serious issue. Therefore, we feel it necessary to increase the number of new workers coming into the farming business. We would like to know why these numbers are not increasing. We understood the cause of this is due to the negative image surrounding agriculture, including the idea of it being dirty, and physically and mentally tough.

### 2. Methods and Results

First, we visited the Kitakyushu City Hall to learn about the Agriculture Employment Support System. According to the survey, we found there are programs set up to help increase the number of new farmers. However, these programs at present have yet to change the figures of new agricultural employment.

Next, we conducted an interview with a professional farmer who is training promising farmers. During this interview, we heard people are reluctant to take the job as a farmer because of its low pay.

Furthermore, during our training abroad in Perth, Australia, we saw a style of work establishing a work-life balance, with many managing a farm part-time while holding another job.

We set up a “mini farm” on our school’s campus, and experienced farming for ourselves. The size of the land was small, but we were able to experience not only the dirty and tough side, but also the joy and a sense of excitement for the harvest.

We also learned about SDGs in class. We have a responsibility to teach the next generation what we have learned through the mini-farm, so we welcomed children around our school and we shared the joy of harvests with them. While we know these activities are quite small, we hope the next generations will continue a tradition of sustainable agriculture.

### 3. Conclusion

Based on our findings, we propose that “agriculture fitting one’s lifestyle” is the solution to increasing the number of new farmers. We wish for others in Japan to have the same wonderful experiences as we did on our “mini farm.” Therefore, we aim for a society where there will be more members farming on the side.

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## Deciphering Our Future With Design Thinking Student's Heatstroke

SGH Number 2751: Fukuoka Futaba High School

Key words: Design Thinking, SDGs

### 1. Introduction

SDGs are not the goals that are far away from us. Because not only adults, but students like us are responsible for solving international problems like SDGs. That may sound difficult, but we think that by using Design thinking, to solve the problems that are familiar to us, we can make it possible.

Today, we would like to talk about what we, youngsters can do to make the future a better place using the process of design thinking and suggest an idea for how we can contribute to the achievement of the goal 3 of SDGs, " Good Health and Well-Being ,Ensuring healthy lives and promoting the well-being for people of all ages is essential to sustainable development."

### 2. Methods and Results

The topic is how to decrease the number of the students who get heatstroke.

In order to solve this problem, we use the process of design thinking.

The first step in design thinking is to emphasize to deepen our common feeling towards problems through group discussion.

The next is to define. At this stage, we put together all the information we created and gathered. We thought the reason why people got heatstroke is that people didn't drink enough water.

The third is to ideate. So we create a reminder to drink water which can be carried wherever you go.

The final step is to prototype. We create a trial watch that can measure one's body temperature, examine how much our body needs water, and show us what time we should drink water next. The good points of this watch are we can wear it all the time and the display is detailed. But actually it is an expensive machine, and it seems difficult to spread and implement.

### 3. Conclusion

By making a prototype, we found out that it may be a little difficult for students like us to produce the product itself. Also, it would take a lot of time to get many people to use it. Although we didn't have enough time to remake it, the most important thing is to go through the stages of design thinking over and over to find the best solution.

Contributing towards the SDGs may seem like a big task, but everyone, including students like us, definitely should work on it to achieve the goals before 2030. This time, we found a way to keep people healthy, by preventing heatstroke. It is not easy to find goals that high school students can achieve and to create a solution using design thinking, but we strongly believe our small actions may change the world. We are expected to look at situations from many perspectives, and always have a positive way of thinking. This is a chance to use the creative power that youngsters have. To make our future a better place, we are the ones that must take action, and the time is now.

### Awards

Poster session award from Academic festival of Kyusyu University.

# A plan to improve disaster prevention awareness in young generation

Think together, Think BOUSAI! ~From 『helped people』 to 『helping people』 ~

2752 Meiji Gakuen high school

Key words: disaster prevention, helping people

## 1.Introduction

Recently, large earthquakes have been occurring frequently in Japan. Also in Kitakyushu City, where Meiji Gakuen is located, there are some active faults. Earthquakes are difficult to predict and prevent, so it is important that people have enough consciousness of disaster prevention and reduction. So we surveyed the attitudes of high school students towards disasters. As a result of the survey, the problem that there is a low consciousness among them became clear. In order to improve this situation, we thought that we need to do some disaster prevention enlightenment activities in order to improve disaster prevention awareness of our same generation. Moreover, we plan to make a model of activities for young people and offer it to other countries in the Pacific Rim, which often bother the damage caused by earthquakes and tsunamis.

## 2.Methods and Results

We planned two activities in order to improve our disaster prevention awareness. First, we conducted enlightenment activities for primary school students. Through a quiz about disaster prevention goods and a simulated experience of disaster, we called for the threat of natural disasters and the importance of disaster prevention. By conducting these activities, we tried to make them interested in disaster prevention and share their knowledge with their families. As a result, according to the questionnaire we conducted, 70% of the students shared their experience with their families and many of them prepared emergency bags. Second, we held a disaster prevention symposium for high school students. Over one hundred students, including local high school, participated in it. It was supported by Kitakyushu City and the Japanese Society for Active Fault Studies. It consisted of lectures by some experts of earthquakes and the victims of Kumamoto Earthquake and a panel discussion where we discussed future disaster prevention with the representatives of other schools. Most of the participants were satisfied with the symposium. In addition, we took part in “High School Students Summit on World Tsunami Awareness Day 2018, where over 400 students from 49 countries gathered. We exchanged our idea with other countries of the Pacific Rim, made sure that enlightenment activities were not enough and agree that disaster prevention needed. Through these activities, we shared our disaster prevention awareness with some students of our generation, some youngers, some elders, and some people from abroad and succeed in making a circle of disaster prevention.

## 3. Conclusion

According to the result, our evaluation activities for primary school students were very effective. In addition, the symposium changed the awareness of the people of the next generation. In order to spread disaster prevention awareness, we are now planning to cooperate with municipal schools in Kitakyushu. When we attended Higashida sustainable international conference, we met the Kitakyushu education committee chairman and started to associate with municipal schools in Kitakyushu. For example, we are now asking Kokura high school to cooperate with us. As our future prospect, we will improve next generation's disaster prevention awareness by spreading these activities.

## To Maintain “Nutrition” for Next Generations - Comparison of Japan and Malaysia-

SGH Number: 2753 Nakamura Gakuenn Girls High School

Key words: Nutrition

### 1. Introduction

We went to Malaysia for our school trip. We saw a boy seating alone in front of a restaurant. He seemed to tend the restaurant. We were surprised at the situation that a child worked. In Japan, we have never seen the children working, nevertheless there are children who can't eat enough. From the fact, we decided to survey actual food circumstances in Malaysia and Japan.

### 2. Methods and Results

In modern Japan both poverty and food waste are happening at the same time. Malaysia, where we visited for school trip has similar problem. The global food banking network is moving on as the countermeasure for poverty around the world, including Japan. If all these organizations work, many people will be able to get enough food. But even if all people can get enough “amount” of food, there is still one more problem we should think about. It is nutrition. If we do not care about nutrition, people cannot have lifestyle-related diseases like cancer. We think it is difficult to have healthy and rich lifestyle unless all the generations get well balanced meal.

### 3. Conclusion

We suggest the project that high school students teach elementary school students importance of meals and nutrition. After the teaching, they cook lunch together. We expect 2 big good effect in this project.

1. For elementary school students, this project is the chance to be interested in food and nutrition.
2. High school students can understand more deeply about food and nutrition by learning and teaching about them.

Among students who are from different countries, this project can also be carried out. After a few decades, the generation who have knowledge of food and nutrition tell next generations own knowledge so that they can maintain and spread the awareness of food and nutrition. We hope this project play a role in our better future.

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## An education for denuclearization by using the supplementary material -to close the gap of understanding about the atomic bombs-

2754 Nagasaki Higashi High School

Peace, atomic bomb, education, supplementary teaching material, Malaysia

### 1. Introduction

These days, nuclear weapons catch the world's attention. North Korea declared denuclearization and Treaty on the Prohibition of Nuclear Weapons was concluded. It is the right time that terror of nuclear weapons be discussed.

There are two original supplementary teaching materials about nuclear weapons which our school's students made in the past. But little attention has been given to methods of using these. So, we propose an effective method of usage. We decided to focus on Malaysian secondly school students. The main reasons are that we have an opportunity to talk with them during school trip and that they may easily understand terror of nuclear weapons because Malaysia objects to nuclear weapons.

### 2. Methods and Results

First of all, we chose the material made two years ago because the form of discussion makes you consider nuclear weapons. It can be presumed that it may be used in groups since it encourages discussion and dialogue. We assumed it is used in classes and made a guide for teachers. Then, we made a guide book by using teacher's manuals of history as a reference. It consists of two parts. One explains flow of the class and the other interprets sentences and makes additional information. We added links to "Guidebook for Peace Communicators STEP" and a short video with English subtitles that introduce how to discuss. We are planning to show Malaysian high school students the material during school trip and have them later send impressions of the material.

### 3. Conclusion

It hasn't become clear that this guide book helps people to use the material effectively. So, we are going to have a trial workshop with them. We will amend the guide book based on trial workshop's result and their impression of the material.

This teaching material gives you an opportunity to consider nuclear weapons. We would like people all over the world to use this material. Now this material is hardly known, so the study to let people know about it should be promoted.

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## Focus on effect of fertilizers on soil and growth of crops

2755 Miyazaki-Omiya Senior High School

### 1. Introduction

Many people think that organic farming is superior to farming with chemical fertilizers. And although the use of fertilizers is increasing, the amount of crops produced is decreasing. People sometimes attribute this consequence to chemical fertilizers, but it is unclear whether chemical fertilizers are actually as harmful as many people suggest. Therefore, our study will investigate the effects of chemical fertilizers on soil.

### 2. Methods and results

To conduct our experiment, we raised mustard spinach for one month in two kinds of soil, black soil and baked soil, and in four conditions: with nothing added, with organic fertilizer, with chemical fertilizer, and with a mix of organic and chemical fertilizers. This gave us eight variations. We prepared five pots of each arrangement for a total of forty pots. We then evaluated the soil's biological and chemical properties before and after growth.

In experiment 1, we evaluated the soil's biological properties by measuring the breathing of soil microbes. These microorganisms make soil rich, so it can be said that the higher their number is, the more fertile the soil is.

For this experiment, we first put filter paper with solutions of sodium hydroxide and of phenolphthalein into tightly closed containers with samples of each arrangement of black soil. The solutions then caused the paper to turn red. However, the  $\text{CO}_2$  produced by soil microorganisms as they breathe neutralizes the solutions on the filter paper, causing the red to fade. We recorded how long this process took for each sample. Figure 1 compares the neutralization times of the samples. From this graph, we can see that there is little difference between the neutralization time of black soil and that of black soil with chemical fertilizer, meaning that chemical fertilizer has little effect on soil microorganisms.

In experiment 2, we evaluated the soil's chemical properties by measuring pH, EC, and  $\text{NO}_3^-$ . pH is an index figure of the concentration of hydrogen ions. Plants grow best when soil's pH is close to neutral (7). In figure 2, we can see that, although each soil variation takes a different amount of time to reach neutrality, some fertilizers can help soil reach pH neutrality over time. By examining the amount of  $\text{NO}_3^-$  (nitric acid ion) in soil, we measured the decomposition of fertilizer by microorganisms. Figure 4 shows that there is no significant difference in  $\text{NO}_3^-$  between soil with chemical fertilizer and soil without any fertilizer, so we can say that chemical fertilizers have no significant effect on microorganisms in soil. EC represents soil's electrical conductivity. The more ions are in the soil, the higher the soil's EC. Figure 5 shows the EC of black soil with chemical fertilizer was a little over 1, which is generally thought to be excessive and a potential cause of microorganism decline. However, since Figure 4 shows that there was little effect on microorganisms, we can say that the soil's high EC is not a problem for the soil's microorganisms.

### 3. Conclusion

We have two important findings: first, using fertilizers can improve the properties of soil that affect vegetable growth; second, chemical fertilizers do not damage soil microbes.

### 4. References

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# Changing consumer's behavior in order to protect the food culture of eels

2756: Kagoshima Prefectural Konan High School

Key words: Eel, Sustainable culture, Consumer behavior, SDG 12, SDG 14

## 1. Introduction

Eels are a special part of Japanese food culture and have been loved by a lot of people for many years. Since the Edo Period, the Japanese have participated in *The Midsummer Day of The Ox* by eating eel to gain stamina against the summer heat. Recently, however, a lot of eels are sold, consumed, and wasted on this day because Japan now faces poor catches of baby eels. In 2017, 2.7 tons of eels were thrown away before reaching consumers. They are in danger of extinction and they will become extinct if we keep eating at this pace. Each one of us should try to ensure sustainable consumption of eels following SDG 12, "Ensure sustainable consumption and production patterns" and we have to conserve and sustainably use the oceans, seas and marine resources for sustainable development per SDG 14.

If we want to keep eel as an important part of our culture, I strongly believe that we, consumers, have to change our awareness of eel consumption. I would like to improve consumer awareness and show what I have done to change the situation.

## 2. Methods and Results

First, I have read some books on eels to find out the current situation. I have found out that consumers should not focus just on summer for eating eels because the demand should for eels should be dispersed.

Second, I sent out questionnaires about the consumption of eels using SNS. The number of participants is 609. Over 90 percent of them answered that they love eels and want to keep eating them. About 75 percent of people know about the poor catch and that eels were listed on endangered species. Most of them only eat eel in the summer.

Based on the result of the questionnaires, I have started three measures to change their awareness.

(1) Writing for the newspaper: I submitted an article about the situation of eels to the "Southern Japan Newspaper", which was published on October 28th.

(2) Releasing the result of questionnaires: I am preparing a blog to show the result of the questionnaires.

(3) Making a teaching aid and giving lessons for elementary students: In some textbooks for elementary school students, there is material about how eels are born. I made supplemental material for it so that students will learn more about eels and have an interest in them. Using the material, I will give lessons in some elementary schools.

## 3. Conclusion

I will ask the readers of the article, the blog, and the elementary school students whether their awareness and actions for consuming eels have changed or not. Based on the comments and reactions, I would like to show the best proposal so that people will not eat eels only in summer, but eat them all year.

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## The approach to sustain regional redevelopment while keeping a global perspective in mind

2801 Kesenuma High School

Key words : connected population

### 1. Introduction

The population is decreasing in Japan. But it is not realistic to hope for rapid population growth. So I thought that to create new local community is important. As I proceeded my studying, I paid attention to the connected population.

### 2. Methods and Results

For the purpose that I would like to know what people who moved from other cities were fascinated, I conducted a questionnaire survey. I asked questions to some people why you would like to get involved with the local. The result shows that they really felt the people's powerfulness, positiveness, and kindness.

And also, I set up the forum for discussion with foreign affiliated company and fishers in our local. We talked a lot about many topics such as the effort of the fisherman's union, the next fishery in Japan and so on. After the meeting, affiliated company told recognized how important we connect with local people each other, and was impressed by the story that the local people have.

### 3. Conclusion

- ① People who live in urban area are fascinated by local people.
- ② Each local people have their own history. This will connect to the people who do not live there.

For the next step, I am seeking the way to show the story that local people have to the people who live in urban area.

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 著者 山崎亮 発行所 PHP研究所  
 『関係人口』ポータルサイト - 総務省  
[www.soumu.go.jp/kankeijinkou/](http://www.soumu.go.jp/kankeijinkou/)

# The Revitalization of agricultural mountain areas in East Asia

## : A case study of Tao-mi village and Motegi town

2802 Tochigi Prefectural Sano High school

**Key words:** Community Empowerment, Intermediary Organization, Regional Development, SATOYAMA, Sustainability, Japan and Taiwan

### 1. Introduction

We focused on Tao-mi, Taiwan, where it made the recovery from the disaster of great earthquake. Taomi used to be a tiny village whose main industry was the paper industry. The village was catastrophically damaged by the Central Taiwan Great Earthquake. However, they started to investigate the ecosystem of Tao-mi with some professional experts. As the result, they built the eco-village. While Motegi-town used to be a village whose main industry was agriculture. The town was hit by the huge riverside flood damage on August 1, 1986, however it made a recovery from the disaster. So we started to investigate and study these two cases to apply them to other areas suffered from disasters.

### 2. Methods and Results

We focused on following three points to compare these two areas. First, the population transition, in Motegi-town, the number of population decreased from 19,656 in 1985 to 12,722 in 2017 (−35.3%), on the other hand in Tao-mi-village, from 1,294 in 1999 to 1,145 in 2017 (−9.4%). Second, to compare the distance between the town and the airport. It's about 154km in Motegi and 196km in Tao-mi, which are the almost same distance and it takes about two hours by car. However, the number of the foreign tourists are about only 300 in Motegi but 24,000 only in Tao-mi eco-village. So we conducted a survey of the difference between these two areas.

### 3. Conclusion

As a result of our FW, we could find out some important points of the activation for the depopulated town. Thanks to the cooperation of Utsunomiya university, Motegi has been investigating the ecosystem of the town. And it has been promoting to activate the economics of the town by the residents. On the other hand, in Tao-mi, Mr. Yu Jia Chen, who is a leader of the activation activities in this area, has made an important roles to rebuild the village. This year we could made an interview to him about this issue. And in consequence, we became aware of the following essential points, ① existence of leader ②cooperation with outside ③love of the hometown ④awareness of the treasures of town ⑤ recognized economy.

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## Difficulties and the Future of Japanese Business Expansion Overseas

2803: Urawa Girls' Upper Secondary School

Key words: business expansion overseas, transfer, increase in wages, resources for reemployment

### 1. Introduction

We went to Ho Chi Minh City, Vietnam in August in 2018 for the SGH program to study the role of Japanese companies overseas. Before going there, we expected Japanese companies had difficulty expanding their business overseas, because of trouble between Japanese employers and local workers, or a difference in the quality of products made in Vietnam versus those made in Japan, for example. However, when we visited the Japanese company, PLUS, in Vietnam, we found this was not the case. Japanese employers and local workers had a strong bond and local workers had the opportunity to develop high-level skills in the factory.

We were surprised to see that PLUS was doing well, but at the same time, we were afraid for their future in Vietnam due to the recent increase in wages in the country. Many foreign companies have had to pull out of the country or transfer to another country because of the increase in wages. We believe that such companies should provide local workers with resources for reemployment prior to departure from the country. We brainstormed solutions about what the company could do for local workers in the event they had to relocate and dismiss a large number of employees.

### 2. Methods and Results

In Vietnam, we visited PLUS factory in Biên Hòa and interviewed the company president, the factory manager, and several local workers. After returning to Japan, we had contact with the president of PLUS through e-mail and asked questions about the present situation and their prospects for the future. We then researched similar situations occurring overseas.

We learned that the wages in Vietnam are rapidly increasing, and, because of this, there is a possibility they will transfer their factory to another country if this situation continues. We propose that Japanese companies overseas offer local workers a special training system. First, training in Japanese language will allow local workers the chance to work for another Japanese company, not only in Vietnam, but also in Japan. Second, a joint training system in cooperation with other Japanese companies would provide workers with closer ties to other Japanese companies in Vietnam.

### 3. Conclusion

In this study, we concluded that Japanese companies overseas should leave local workers with resources for reemployment before pulling out of the country. We propose a collaborative training system with other Japanese companies that will leave local workers highly skilled, which will revitalize the country's economy.

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# Preserving the Native Ecosystem of Inba Swamp

2804: Sakura high school

Key words

Invasive Species Sustainable

## 1. Introduction

Not only in Japan but in all over the world, alien species called “invasive species” are problems.

The Inba Swamp is near our school, and this swamp has problem with these invasive species.

Old ecosystem in the swamp has been lost, so we want to get it back to its original state.

Especially, the Snapping Turtles and Alligator Weeds damage the environment.

So we started to research and find effective ways to deal with the problem.

## 2. Methods and Results

We have taken part in various activities such as literature research, interviews with government staff of our prefecture and a surveyed fellow.

According to these interviews we found it is major problem that the number of participants in extermination volunteer activity is insufficient. Then we found that Alligator weeds are not well known. The questionnaire shows the percentage of students who know about Alligator weed is less than 10%.

## 3. Conclusion

With insufficient participant and the very low name recognition, we thought that we, high school students, can share information and make more people interested in participating. Specifically, we have raised public awareness with posters and SNS, what is more, we joined a festival to share information with many citizens.

Now, we are planning to visit an elementary school to share them and to get students who want to join extermination activity with us.

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Mr. Takeyoshi Tada( the Chiba Prefectural Government the River Environments Division)

Mr. Takeshi Imazu (the Biological Diversity Center)

Mr. Ishizjima (Sakura High School)

## Awards

28.7.2018 Water is Life Award 2018 Stewardship & Policy category Third Place (altered the layout )

※内容変更に伴い、ポスターの改変を行いました。

## How can we let classical music more essential in life?

SGH 2805: The Music High School Attached to the Faculty of Music, Tokyo University of the Arts

Key words: music, social life, Japan and the U.K

### 1. Introduction

In September 2018, we visited the UK as our music study tour, where we gave concerts and cultivated friendly relationships with local music school students. Above all performances we made, the concert at the Duke's hall of the Royal Academy of Music in London was open to the public and received the greatest praise. During the tour, we were amazed by the fact that the classical music is so widely spread through the life in the audiences and is quite essential to the English people. The situation of classical music in the UK is much different from that in Japan. Through our experiences in the UK, we would like to suggest the way to make classical music more suitable for social life of Japanese people today and let music more essential. We might reflect upon capability of music in order to make social life richer and more significant not only in Japan but also all over the world.

### 2. Methods and Results

To make it clear, we compared the two graphs showing modelled age breakdown of classical music audiences in both countries. We can see that Japan has rather older audiences, while in the UK, working generations, from the 30s to the 50s, had the largest proportion among all the audience. That is the biggest difference between the two countries. We would suggest that, the situation of the classical music in Japan should be better if those generations come more often to the concerts.

Now we would like to see the example of the European countries in the early 19th century, where the classical music was one of the main interests among ordinary people. In the early 19th century in Munich, there were musicians who insisted that we should write solely simple and inferior music for ordinary audience. However, German composer Felix Mendelssohn was against this idea, and he mentioned that they would definitely get interested if we served them with mesmerizing music.

### 3. Conclusion

Providing mesmerizing music without conforming the stereotype, would increase the opportunity to the great encounters with music, which can even make your life richer and more colorful. We sincerely wish that the gate to the classical music will be widely open to the ordinary people and much more people will experience fantastic moments with music!

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### Awards

None

# Trust building in terms of nuclear disarmament

## Possibility of creating economic and cultural bonds

2806: Soka Senior High School

Key words: nuclear disarmament, international relations

### 1. Introduction

In the concept of nuclear deterrence, nuclear weapons are directed against the rivals for the sake of protecting their own nations. It is based on “mutual distrust” among/between nuclear states. However, this means that if every country could trust one another, those weapons are no longer necessary. In order to establish a credible international relationship, there should be a clear vision, mutual profit and plans to materialize it.

### 2. Methods and Results

Analyzing past events as case studies. Complete nuclear disarmament was successful in Ukraine because this trilateral agreement was beneficial for every country involved. In contrast, Iran nuclear deal is not perfect due to its obscured future.

### 3. Conclusion

Trust building between/among confronting states has worked in real cases. Especially, economic bond augments trust between nations most effectively as it brings mutual benefit.

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### Awards

N/A

## What kinds of improvements can we see under Non-communicable Disease strategies by the government of Republic of Palau?

2807: Takatsuki Senior High School

Key words: Small Islands Developing States(SIDS), Non-communicable Diseases (NCDs)

### 1. Introduction

In recent years, Small Island Developing States (SIDS), which is facing climate change and the problems specific to small island countries, have been drawing attention in the world. According to a document published by Food and Agriculture Organization of the United States, UN-OHRLLS and United Nations, SIDS share unique and particular vulnerabilities, resulting in a complex set of food security and nutrition challenges. For example, SIDS face climate change, rely heavily on remote markets for their food supplies, and suffer from the burden of malnutrition.

Palau is one of the SIDS and a newly independent state, which became independent in 1994. The alarming situation stems largely from consuming a diet of processed imported foods that has extra sugar and fat. So, NCDs like obesity and diabetes are at dangerously high levels in Palau.

According to a document published by WHO, Non-communicable diseases account for 74% of the total mortality rate in 2008. This shows that the NCDs are an urgent matter in Palau. Also, it is revealed that the government of Republic of Palau has been setting a goal of improvements in NCDs problem and tackling the problem in recent years. However, specific strategies under the government of Palau to improve the current situation have not become clear and it is quite challenging to accurately grasp the current situation of NCDs because the latest data was updated in 2008.

Considering the above, this research reveals how the government of Palau is tackling the problems of NCDs and achieves some improvements of them.

### 2. Methods and Results

The fieldwork has not been conducted yet as of the day I am writing this. So, results have not been revealed. Instead of referring to the result, this section shows what is planned to examine in Palau.

- What kinds of specific strategies the Ministry of Health and the Ministry of Education are developed
- What kinds of specific strategies are developed
- Whether people in Palau actually eat healthy diet and have awareness of healthy diet.
- Whether people in Palau is taking exercise on regular basis.
- What kinds of effort can be seen to improve lifestyle and living environment in Palau
- The transition of the number of NCDs patients.

### 3. Conclusion

The detailed data will be given based on the result of the fieldwork in Palau.

### References

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### Awards

No awards



## HIDAKARD

### --Simulating Evacuation Center Management with Foreigners--

2808: Wakayama Prefectural Hidaka High School

Key words: local disaster prevention, Hinanzyo Unei Game (HUG), multicultural coexistence

### 1. Introduction

Our research theme is local disaster prevention. In Indonesia, where we have some partner institutions, we realized that it is necessary to have the local people promote the awareness of the problem to overcome the situation. Then we shared the idea of the necessity to develop a device to solve the problem.

In Japan, various kinds of initiatives and research are carried out. We picked up a simulation game of an evacuation center operation (HUG) developed by Shizuoka Prefecture.

We decided to carry out our research, integrating HUG with two elements: “support for foreigners in time of a disaster,” which has been paid greater attention to, and Japanese people, typified by us, students at Hidaka High School, with few opportunities to contact with foreigners in their daily lives. We set a goal to realize “multicultural coexistence in the countryside” by developing a tool integrated with “HUG” and “English.”

### 2. Methods and Results

- 1) To develop simulation cards in English based on HUG (HIDAKARD).
- 2) To divide the participants into three different groups and have them play the simulation game with "HIDAKARD" and HUG. After the game, the results of a questionnaire and the video recorded during the game are examined and compared.
- 3) HIDAKARD will be utilized as a tool for cooperative learning in overseas study tours next year.

Research date and time : Oct. 29th, 2018 am.11:30 to pm. 12:45 (75min)

Research object : 223 students at Hidaka High School, 65 students from abroad, and 15 local residents

Research items : (1) Whether the tool utilized was of help to the simulation of an evacuation center operation

(2) Whether the necessity to improve English communication skills was realized

(3) Whether one worked positively in collaboration with other participants

Results (abstract) : In Group A, which consisted of students from abroad and students at Hidaka High School, positive answers to (1) was 49%, which was relatively low, while answers to (3) 85% was higher than that of Group B, which consisted of only Japanese.

### 3. Conclusion

Findings from the research are as follows:

- 1) HIDAKARD can be carried out effectively under a certain condition,
- 2) HIDAKARD is an effective tool for students to realize the necessity to improve their English abilities,
- 3) HIDAKARD can be used to introduce to foreigners a learning tool for disaster prevention.

We hope that the cards will be utilized as a tool to enhance the local people’s awareness of disaster prevention on the overseas field trip next year.

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## The Current Situation and Problems of Production Base in the Mekong Delta

2809: Saga Prefectural Saga Agricultural High School

Key words: production base, irrigation system, creek system, anti-flood pond, water pollution, low land

### 1. Introduction

The purpose of our investigation is that we'd like to find out the problems of the production base in the Mekong Delta by comparing that with the production base in Shiroishi. Through our investigation, we have studied about the current situation of water pollution and the irrigation systems in the Mekong Delta. By using the results of our study effectively, we'd like to offer agricultural promotion measures to the people there.

### 2. Methods and Results

We investigated the river water and irrigation water in the Mekong Delta. To measure the water quality there, we used simplified water analysis products sold by the Kyoritsu Chemical-check Lab.

Before we went to the Mekong Delta, we got the data about the rainfall amount and the feature of rainfall in Shiroishi and the Mekong Delta. Then, we visited the Mekong Delta, we checked some water gates there and interviewed some experts of local universities.

Table 1 shows the results of our investigation. We found out that the data of 13 samples are much higher than the standard value in Japan. From the results, we understood that the water quality of some rivers and irrigation water in Mekong Delta is really bad. On the other hand, measuring by the standard value in Vietnam, the data of just 3 samples are higher than the value. In other words, the standard value of water quality in Vietnam is much lower than that in Japan. For the next step, we need to trace the causes of the pollution to remedy the bad water quality.

Table 1 The results of comparing the standard values of the rivers in Japan and Vietnam and the names of each measurement (mg/L)

	COD	PO <sub>4</sub> <sup>3-</sup> -P	NH <sub>4</sub> <sup>+</sup> -N	NO <sub>2</sub> <sup>-</sup> -N	NO <sub>3</sub> <sup>-</sup> -N
Standard values of the rivers (Japan)	0~5	0~0.05	0~0.5	0~0.02	1~2
Standard values of the rivers (Vietnam)	10~50	0.04~0.20	0.1~1.0	0.005~0.01	2~15
At floating market	10	0.40	0.8	0.002	0.4
At conserved forests	26	0.20	1.0	0.040	0.4
At seedling research center	10	0.10	0.4	0.005	0.6
At water gates (freshwater)	21	0.14	1.0	0.050	0.6

### 3. Conclusion

In the Mekong Delta, because of the low land feature, seawater flows back toward inland in the dry season. So, the farmers there could only do single rice cropping in rainy season. However, the salt free project, which was conducted by the local government, enabled them to do rice cropping even in the dry season. And also, because of its negative geographical feature in the Mekong Delta, many floods have occurred easily. As for the counter measure to this problem, we'd like to suggest to the local Vietnamese people to install the creek system we use in Shiroishi. We believe that since it is an anti flood creek, it can stop occurring floods there. To put our plan into practice, we investigated water levels in irrigation channels there by cooperating with Saga University. For the next step, by gathering the data of water income and outcome there, we'd like to construct models of anti flood ponds that fit the local geography there.

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# Sending messages about "Life" from Minamata HS students living in a "Top Eco-City"

2810: Minamata High School

Key words: Disability, Eco-city, Eco-friendly, Environment, Life, Mercury, Minamata, Minamata disease, Pollution

## 1. Introduction

In the world, there are environmental and health issues caused by mercury. Minamata City, Japan, has also struggled with mercury pollution, known as "Minamata disease," which is one of the four major pollution diseases of Japan. To solve the global problems of mercury, we have studied the consequences of Minamata disease and the current situation of Minamata City, and considered what we can do for "future Minamata."

## 2. Methods and Results

We researched the circumstances of how Minamata disease happened from books in the school and city libraries, and gathered some information about it on the Internet as well. We found more details about the fact that industrial wastewater which contained mercury flowed out into the ocean, then ended up damaging human health as people ate many fish that had bioaccumulated mercury. In addition, the polluted area of Minamata bay (58ha) is reclaimed today, but this means there is still a large amount of sludge that contains mercury under the reclaimed land, and it is possible that mercury may come out.

To learn more about Minamata disease patients, we visited the welfare facility called "Hotto Hausu," which was built to give Minamata disease patients and people with disabilities opportunities to work. From our interviews, we learned that Minamata disease patients have been suffering from not only various health issues but also discrimination and bias even after the announcement that Minamata disease is not contagious. The patients' families also have been discriminated against. Moreover, we discovered that Minamata still has some problems which make it difficult for people with disabilities to live comfortably. For example, in the downtown area there are many small bumps on the roads and some buildings do not have automatic doors even though they are used quite commonly by people in Minamata, so people who use wheelchairs cannot easily move around by themselves. Through our research, we started thinking about what we should do for "future Minamata."

## 3. Conclusion

We have to study ways to detoxify the polluted area of Minamata and promote global understanding of Minamata's experiences so that people in the world can prevent mercury poisoning from happening again. It is also necessary to improve the environment of Minamata City by making it more friendly and accessible to people with disabilities. To achieve these goals, it is our responsibility to continue sending out messages about "the importance of life" from Minamata disease patients.

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## “Kame, Kame” Mozuku Seaweed Project

### Eating Mozuku to Promote Health and Tourism in Okinawa

2811:Nahakokusai Senior High School

Keywords: Mozuku, Recipe, Health, Tourism, Sustainable business model

#### 1. Introduction

“Mozuku” is a type of seaweed locally produced in Okinawa. It has been recognized as one of the soul foods for local citizens and has a high nutritional value, gaining attention as a healthy ingredient. Although 99% of mozuku consumed in Japan is produced in Okinawa, most Okinawans don't know the true value of it. Our research aims to increase the demand for mozuku to potential overseas customers by raising the interest of tourists in regard to our product.

#### 2. Method and result

For background research, we conducted a questionnaire and an interview. First, we gave a questionnaire to students at Nahakokusai H.S about their daily diet. Second, we had interviews with, 沖縄県モズク養殖業振興協議会, the Okinawa Mozuku Fish-Raising Industry Cooperative Association. According to the questionnaire, 80% of students do not cook themselves. However, most of them want to cook for themselves in the future. The questionnaire result suggests the need for recipes of dishes which can be easily and quickly prepared. According to the interview, the association said that 90% of mozuku will be exported outside of Okinawa. However, people in other prefectures tend to only prepare mozuku as a simple vinegared dish.

#### 3. Conclusion

At the beginning of our project, we proposed the tour plan for tourists to increase the demand of mozuku and posted mozuku-cooking videos for foreign people. Our research methods successfully received many positive reviews in terms of our on-going PR plan regarding mozuku. We expect that our research would be a feasible plan to increase awareness in Mozuku seaweed worldwide. As a future prospect, it is possible to transform our plan into a sustainable business model to boost the sales in mozuku. For example, we will produce cooking video clips available in English, which attracts foreign tourists to the mozuku tour. By doing so, further recognition and consumption for Mozuku seaweed will increase.

#### 4. Major Reference

健康沖縄21 ([www.kenko-okinawa21.jp/](http://www.kenko-okinawa21.jp/))

沖縄県もずく養殖業振興協議会(<http://www.mozukukyo.org/>) 他

#### 5. Award

Nahakokusai Senior High School SG Project II Presentation Contest 1<sup>st</sup> Place

# GANBRESHEET

## ~The World We Discover From Earthquakes~

A03: Hokkai Gakuen Sapporo High School

Key words: Earthquake, SATO, GANBRESHEET, Education

### 1.Introduction

We are going to do a presentation on the necessity of education because we think it is related with hygienic environments, for example the lack of toilets. On September 9<sup>th</sup>, 2018, we experienced the Hokkaido Eastern Iburi Earthquake. Approximately the water supply of 62,000 households were cut off right after the earthquake had occurred. We have become painfully aware of the situation where we cannot use the toilet because of the water supply being cut off, and also we had our doubts against the areas that have no toilets; “Why aren’t there any?”, “How are the hygienic environments?”. According to our research, 2.3 billion people in the world cannot use sanitary toilets. About 900 million people in the world use the outside toilets. Of course, there are so many causes for this issue. But we think one of the reasons is that they don’t know how much hygienic environments are important for their lives or how to make the environment better. So our idea is that the Education Problem is fundamentally related to this issue.

### 2.Methods and Results

Therefore, we came up with “GANBRESHEET”. This is a way of giving children education, using a “receipt”. Using a receipt, the children can learn words, and also they do multiplication using the numbers written on them.

What is even better, the receipt has 2 roles: the notebook and the pen itself. By using one’s nail, you can scratch the back of the receipt and you can take notes. We have not yet taken this into action so we do not have results, but we think it is a great idea.

### 3.Conclusion

To solve the problem, we will collect receipts from all over the world and sort them according to what language they are written in.

After that we will send the sorted receipts according to what language the children in the country wants to learn. We strongly believe that this will spread through the world.

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### Awards

None

# NANBUTEEKI from Japan to world with rental Business!

## ~Aiming to revitalize the tourism industry of Iwate~

4 Morioka Chuou High School

\*NANBUTEKKI → Made of Iron. It's used tableware, cookware and so on.

\*Tourism consumption → It is the sum of domestic tourism consumption and outbound tourism consumption

### 1. Introduction

\*Iwate's tourism revenue is pretty low. We would like to increase tourism consumption and activate Iwate. For that purpose we use a business plan.

\*And if we succeed in this business, we would like to expand our horizons to overseas. We think that we can share the method because overseas are struggling with low tourism income and selling traditional crafts.

### 2. Methods and Result

We examined Japanese population, tourism consumption by prefecture and one of the traditional crafts in Iwate prefecture, NANBUTEKKI, on the Internet focusing on traditional crafts and health.

Data 1

Prefectures	Tourism consumption (\$10,000)		
	Outside the prefectures		
	Lodging	A day trip	Sum
Hokkaido	295,981	4,175	300,156
Aomori	39,454	29,614	69,068
Iwate	47,826	13,330	61,156
Miyagi	68,598	28,064	96,662
Akita	22,043	17,924	39,967
Yamagata	52,978	55,247	108,225

### 3. Conduction

To solve this situation, our business model is as follows we lease Nanbutekki tableware to high-end restaurants. They provide the information about the Nanbutekki and recommend the guests if they like them. The restaurants serves as an intermediary, or rather an ambassador.

### 4. Reference

Tourist entrance statistics by common standard (Annual value 2016 fiscal year); <http://www.mlit.go.jp>

## To maintain local government ~through the current state of Kawanishi town~

A06 Kunori Gakuen High School

Local government, depopulation, children, move to a local area

### Introduction

These days, the concern over the local governments in Japan has risen. The population in Yamagata prefecture has been also decreasing. It is important that how the population of local governments can be made to improve. The present study focused on the action by Kawanishi town in Yamagata prefecture. This town is the hometown of author. Kawanishi town has been taking action in order to inform the people in other area about its attraction. In this study, what measures are taken in this town and how much influence the measures have will be discussed.

### Method

The interview was conducted on August 17<sup>th</sup>. The author went to the city office in Kawanishi town. The interview was male staff in the city hall. The two questions were asked. Q1 What kind of measures has the Kawanishi town been taken so far? Q2 Were the measures considered effective?

### Results

For Q1, Kawanishi town has planned some event called “Yamagata Kawanishi Bean Bean Exhibition”. This event was held in Tokyo and the purpose of this event was to spread the information about its products. One of the other measures is “Higashizawa Yantya Ryugaku” which the children of Machida city in Tokyo come to Kawanishi town. In this project, the children from the big city can experience farming, the rural festivals in this town, a barbecue using Yonezawa beef which is one of the most famous beef brands in Japan. Moreover, they can interact the children in the rural area and it leads cultural exchanges.

For Q2, these measures I mentioned above had some effect to increase migrants from the big cities. However, there is still room for improvement in these plans. The awareness should be raised in order to increase the participants for the events.

### Conclusion

The interview was conducted in the city hall in Kawanishi town and some measures by the town were found out from this interview. The actions should be improved to increase publicity of the city. One of the solutions is “Higashizawa Yantya Ryugaku” because children would be influencer for the rural city in the big city. For prospects, it is important to promote the children in Machida city more to raise the number of participants. The announcement or advertisement the other towns have done will be discussed in the further research.

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## What can we achieve through school education?

### Do students overseas struggle with their homework?

SGH Number: A08 Toyo University Ushiku High School

education, academic score, motivation, homework

#### 1. Introduction

We are interested how students are motivated to study. Studying together with students overseas at school, we also want to know the difference in how students in the world feel about studying or the purposes of studying.

#### 2. Methods and Results

##### A Questionnaires

(i) Toyo University Ushiku High School ( Japan ) (ii) Eastern Fluerieu School ( Australia )

(iii) Shanghai Foreign Language School affiliated to SISU ( China )

First we asked the students in Australia, China and Japan ( our school ) to fill out our questionnaire about school life, homework, and their family which showed us interesting difference in three countries. We have two exchange students from Australia and China now. Also some of us made a study tour for two weeks in Adelaide, in South Australia last November, both of which enable us to know well about their ways of studying in detail.

##### B Studies among students in some countries

Second, we read some international researches on teenagers' thoughts about school lives and their future. We found it surprising that in Germany whether people study at university or not has nothing to do with their occupation as long as no qualification is required of them.

#### 3. Conclusion

We have found out what we Japanese students need as learners. One of them is a feeling of self-respect. As is often said, many of us feel ashamed of making mistakes as we tend to think we have one answer for one question.

At school it is nice to get new knowledge. Also it depends on us how we make use of it. We think it important to tell it to others in our own ways and especially our family members can be good listeners. Too much homework may be one of the reasons to keep us from enjoying talking with them.

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#### Awards

None



# The Connection between Health, Welfare, Medicine and Technology

## ~ Innovations the Key to Making the World Better~

A13 Gyosei International School

Health, Welfare, Medicine, Technology

### Introduction

In developed countries medical technology is essential in treatment, but they are not accessible to developing countries. And only a few people know how these technologies were made and understand the ideas of their manufacturers and inventors.

### Methods and Results

As intern in an Institute of Technology, I became involved in tap-water driven artificial muscle research. Usually powered by air pressure, artificial muscles rehabilitation devices often rely on expensive equipment that can alternatively operate with water pressure from a faucet, a solution allowing rehabilitation access at home.

### Conclusion

Bringing these advanced technologies to developing countries relies on simple innovations by the developer.

### Reference

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## Restoration and Reconstruction from the Great East Japan Earthquake

A14 Tokyo Gakugei University Senior High School

### Keyword

Restoration, Revival, Make City, Seawall Construction, Consensus Formation, the Tohoku Study Tour

### Introduction and Method

Tokyo Gakugei University Senior High School carries out the Tohoku Study Tour continuously, seven times, just after the Great East Japan Earthquake. We visited Kesenuma, Natori, Onagawa, Higashi-Matsushima city, Miyagi Prefecture in this year. And we had interviews with people lived these cities, about making the cities and the seawall construction after the earthquake disaster. Based on the interviews, the making the each cities were analyzed and evaluated from “17 goals of SDGs”.

### Result and Conclusion

#### Oya Coast, Kesenuma City, Miyagi Prefecture

Goal of SDGs : 11) Make cities and human settlements inclusive, safe, resilient and sustainable

Oya coast, Kesenuma City, Miyagi Prefecture was seriously affected by the tsunami occurred in March 2011. In 2012, the prefecture administration decided to construct a 9.8 meters high seawall by reclaiming the sandy beach, however, the citizens proposed the city to remain the sandy beach, and the construction of the seawall was suspended once. Then for years, the citizens repeatedly discussed about the plan, and in 2016, the alternative plan that proposed to raise the national highway and make its slope as the tide embarkment, and now they are waiting for its construction.

The desire of the citizens who eagerly called for remaining their daring coast to their children in the future created an alternative plan at the same time with securing the safety of the city from the anticipated disaster by the Tsunami, and moved the administration. The ideal consensus formation was realized by the cooperation of the citizens and the administration by playing their own roles.

#### Higashi-Matsushima City, Miyagi Prefecture

Goal of SDGs : 7) Ensure access to affordable, reliable, sustainable and modern energy for all

Higashi-Matsushima city was devastated by the Great East Japan Earthquake, but due to the administration's entrusting certain authorities to citizens and the private sector, it realized speed recovery and even reconstruction. In 2012, Higashi-Matsushima MIRAI and Organization (HOPE) was established as an intermediate support organization for industry, academia, government and people to cooperate, and many initiatives are being implemented. Focusing on energy among them, we launched the project "Higashi-Matsushima City smart disaster prevention eco-town" in 2014, to supply electricity to houses and medical institutions even in the event of a disaster, to prevent global warming by renewable energy Aiming to contribute, rebuilding and town planning aiming for a sustainable future is being carried out.

## Title: Helping Cambodia One Stitch at a Time

SGH Number: A15

Name of school: Keimei Gakuen High School

**Keywords:** Cambodia, education, support, sewing project, mother, sustainability

### Introduction

#### **How Stitches for Riches was established**

The Stitches for Riches project was established in 2014. We were inspired by an NPO project called ASAP (Asian School Attendance Partnership), a mother to mother charity, to establish our own school charity project, which we now call “Stitches for Riches”.

#### **The purpose of this project**

The purpose of this project is to provide educational support for impoverished mothers and their children in rural areas, by providing a source of income. Mothers make handmade products, and the money we make from those products will be sent to the mothers in Cambodia, which will be used for their children’s education.

### Method and results

In the workings of Stitches for Riches, there are three steps. Firstly, we collect unused cloths at our school in Japan. Secondly, we bring the cloths with us to Cambodia to hand it to the Cambodian mothers who will stitch them into goods such as bags, bottle covers, and decorations that we sell at school. We send the money we make in Japan to the mothers in Cambodia so that they can send their children to school. So far, there are 35 mothers in cooperation with Stitches for Riches.

To have a deeper understanding of Cambodia and our project, we visit Cambodia every year. Through our visit, we got to see the current situation of education in Cambodia with our own eyes, and noticed 3 main issues. The three main issues are: high dropout rates, overcrowding, and lack of equipment. The reason behind the high dropout rates is because students get jobs to support their households instead of going to school, and a general lack of knowledge around the importance of education. The reason behind the lack of equipment is mainly due to non-sufficient funds.

To help out with these educational issues, we’ve been working on providing more support, other than the sewing project. For the lack of equipment issue, we’ve been providing the Cambodian school students with school supplies and used Melodicas we’ve collected from our elementary school. When we went back this year, they were taught how to play the Melodicas and played a couple of songs for us. Also we’ve been doing cultural exchanges with the Cambodian schools we visit, benefitting both Cambodian students and Keimei students with indispensable interaction experiences.

### Conclusion

Through the 5 years of our work with the Stitches for Riches project, we’ve noticed that “sustainable support” becomes important, in order to support Cambodia becoming independent in the future. We will continue to donate school supplies and have cultural exchanges, in addition to a new goal. We want to collect a variety of unused instruments, art supplies, and other school equipment and donate them to more schools in Cambodia.

Selling more handmade products will not only lead to more sales, but also spread more awareness of our project and the educational issues of Cambodia. To sell more products, we want to expand places where we sell the products, since we only sell at school now. Secondly, we want to have more variety and creativity of the products. In fact we are thinking of having Bible book covers or accessories added to the list of products. Our third goal is to be able to advertise our project using social media, which is a huge influential platform where we can reach out to people worldwide.

With teachers and wages problem, the reality of teacher’s low wages are holding on some of the graduates from the school that we and ASAP support, from becoming teachers. As a solution, we think that creating a nurturing and supportive environment for teachers is key to solving this issue, such as raising teacher’s minimum wage, and the securing and proper training of human resources to aid those who teach people becoming teachers.

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- Anacott Cambodia [<http://anacott.web.fc2.com/>]

### **Awards**

- Appreciation by Cambodia Nation Region King
- Volunteer Spirit Community Award

Responsible Consumption and Production

## Introduction

Nowadays, there are many problems that people should solve with other countries called global issues. Among them, we especially hear about refugee and poverty problems. Many people are difficult to imagine who they are, because not all the people see a real situation each day. So, when we worked on this project, we focused on more familiar issues that have influenced to people and environment on the earth. Thus, we decided to research about the effects on clothes.

## Methods and Results

We suggested two solutions to the problem of fashion waste. We introduced what Fast Retailing, a Japanese specialty-store retailer of Private-label Apparel, is doing. First suggestion is to make eco-friendly clothes. We listed up some materials used in products of UNIQLO and GU that we should and shouldn't use to save the environment. When they make something that are good for warming our body like sweater and scarf, companies should use the cotton that BCI push ahead. These cottons are not only kind for the environment but also for the cotton farmers. In addition, we can help solving children's mandatory labor issues, especially those in Uzbekistan. And, when they make wood-based products such as earrings and belts, they should use cellulosic fabric. Additionally, when they make clothes that touch our body directly, socks and t-shirts for example, materials such as fur, merino, wool and feathers of all kinds of animals should be used. Second suggestion is to re-use and recycle. In UNIQLO and GU stores, boxes into which everyone can throw their used clothes of those stores are installed. In this All-Product Recycling Initiative project, 77 billion garments were collected and 30 billion garments were donated to 65 countries and regions by August 2018. As for other unwearable clothes, we've recycled them as high-calorific solid fuel.

## Conclusion

Through this research, we recommend apparel companies to use materials that are mainly used by UNIQLO. Moreover, we suggest donating our used clothes to Recycle Boxes that are put in UNIQLO and GU stores. We also recommend re-using the clothes by giving them to your family or friend, because that might be the easiest way to reduce fashion waste. More and more people (customers) should think about how wasting clothes involved in environmental issues.

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## Our quest for better Tsuruga High School – Let's make our school more attractive -

SGH A23: Tsuruga High School

Key words: education / active learning / students' agency / Germany

### 1. Introduction

Originally we just wanted more junior high school students to come to our school. We had our Open School for junior high school students, and we did research on JHS students to find what to do. We had thought we had a good school life, but through this survey we looked back on our school life and our school education. As we proceeded, we found our school full of problems and felt we wanted to change our school so that every student can have a big dream.

### 2. Methods and Results

First we asked parents who came to open school what they saw here or their image of Tsuruga High School. Second, we asked junior high school (JHS) students the same questions. The results showed that JHS students have various images, both good and bad. Some said, "Students are making an effort to succeed in both study and club.", "The students seem to enjoy school life," "The teachers are trying hard to support students.", while others said, "Students are force to study.", or "Too much homework." Through these results, we discovered 3 problems about the present situation of our school.

First, we often say "Our school always does our best to support students." but it is not always true. For example, my school is supposed to give extracurricular lessons after school, however it is often canceled. Second, students are too busy to take part in extracurricular activities. We have many chances to join activities but almost all of us are tied to club activities and do not join any extra activities even though we know those activities are instructive and useful for our growth. Besides, we have a lot of assignments and small tests. If we join activities, we became much busier. Students are stressed and tired. It is a very bad both for the school and the students. Third, almost all students think our school makes us study or just memorize things. It is a big problem. Our survey indicates JHS students want to come to Tsuruga to make their dream come true. However we tend to hate studying after attending.

### 3. Conclusion

1. Our teachers should do more extracurricular lessons. We want more chances to study at an advanced level.

School could ask outside people to come if they are busy. The PTA will pay for that.

2. Our teachers should adjust the schedule when we join extracurricular. Our school should consider more students who want to join a lot of activities. Ex: Give students the right to choose what they want to do. (Now once you join a club, you must go every day.) At the same time extra activities should follow their schedule strictly. By doing so, students will use time efficiently to both study and do club activities.

3. Teachers should make our class more active so that students can acquire various skills we need in the future.

### 4. Further study

Now we decided to research education systems in foreign countries in order to find a better plan. We accepted exchange students from Germany last year. We were surprised at the difference. They seemed to be motivated to learn. Through this experience we hypothesized German schools not only do regular classes differently but also respect the time when students study by themselves. So we will research two points about the way they think about education.

1. Is there any difference in the way teachers teach students at school?

2. Is there any place or committee that encourages German student's studies?

So we are going to visit Germany in February. Hopefully we will find hints to help answer our questions.

## A society after entrenched stereotypes: Comparing the gender gap of Japan and the Philippines

Gender gap in our mind

A31 Seijoh High School

**Boys like blue and girls like red. Boys wear pants and girls wear skirts. Girls are nurses and boys are doctors. After marrying, women raise children and men go to work. Why do we tolerate these stereotypes between men and women? Because you are male and because you are female, you need to do this. Duty and responsibility like these should not exist. We have doubts about gender bias around us. We want to propose getting rid of established gender roles to make a world that everyone can live easily.**

Do you know that the Philippines has the highest gender gap index in Asia? When we change the point of view to that of the world, among the top ten countries seven are from Europe but only the Philippines is from Asia. On the other hand, Japan, which has achieved a high degree of industrialization as a developed country, was in the 101<sup>st</sup> place among 145 countries. We want to show why such a big difference like this happens between the same Asian countries by comparing the Philippines' social policy and consciousness to gender with Japan and how Japan should face gender stereotyping.

First, we want to focus on the percentage of women in government agencies. In Finland, 47.6% of agencies are women. But in Japan the percentage is only 11.1%, which is very low. Why can the Philippines have such a high percentage of woman in government?

In Japan, the stereotype that the man should work and woman should be in home is deeply rooted from ancient times. Even now, the way of thinking that women do housework and take care of the home is natural. But in the Philippines, they don't think a woman's work is at home and believe it should be done by the whole family. In Finland it is normal for many homes to hire helpers and entrust them to do all the housework. Because there is understanding and cooperation among people an environment where women can work easily has been created. In 1975 The Philippines Commission on Women was established to play a central role of gender policy, and after that in 1988 an NGO organization called Women Involved in Nation Building was established. From these policies, women in the Philippines can now play a central role in banking, education and government agencies. Nowadays, the Philippines is known as a country that has a high rate of gender gap index but it was not that high in the past.

We can't just mourn an unequal society. We must get on with the task of building a living society by ourselves. To that end, we need to spread the word about the issue of gender inequality Japan has, and get interest. As one of our efforts, we will set up an individual NPO corporation and make a website. Then we will disseminate our opinion across Japan and gather people who also want to solve the gender issue in Japan. By launching a corporation, we involve a wide range of people from all over the country and we speak on the website on behalf of these people about gender. Also, as a corporate activity, we hold a general meeting several times a year and have people in various regions of the country participate. It will aim to provide a forum for discussion on gender issues through exchanging opinions. Then we gradually expand our circle of activities around us and encourage people's interest in gender issues throughout Japan.

<http://www.pref.kanagawa.jp/docs/x2t/documents/35ggi-0330150755.pdf>

Gender gap index • in2017

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International Labor Organization(IOL) new report

# How have Australia created its multicultural nation without excluding its indigenous people.

## The concern that the world is facing now and how to overcome them by the experience with aboriginal people

A32: Nagoya International Junior and Senior High School

Key words: Multiculturalism, Indigenous

### 1. Introduction

Nagoya International High School's members who are conducting this project has a connection between Australia in some way. One has experienced a homestay in Australia, and the other have lived in Perth, Western Australia for 6 years. Throughout our unique experience we have been able to know the situation that aboriginal are faced currently. World is diverse and globalised than ever. We have looked at the Australian history to discover some key elements for people to accept multiculturalism and have a sense of equality.

### 2. Methods and Results

We have analysed several research papers, internet resources and the official documents distributed by the Australian government, to compare the circumstances of aboriginal people now and back in time when there was a segregation. Australia supports indigenous people mainly from three aspects; finance, education and health. We have also conducted interviews to non-indigenous and indigenous parents, asking them about what is going through their mind. Some points were mentioned about the low employment rate for indigenous people, they added that the government should be providing more support to those people. From the interview we can understand that even though the governments dedication to the equality, however there is still a huge difference the indigenous and the non-indigenous in education, health and finance.

### 3. Conclusion

Australia has been accepting immigrants from more than 200 countries. Even though it is a multicultural country. There is a difference in position between people who are immigrants of Australia and the traditional owner of the land. Europeans have a history of taking away the land and abolishing rights of the indigenous people in Australia. To reparate this, the Australian government has provided several services and hospitality to the indigenous people. However even now there are some segregation, alcohol addiction rate, low in graduation rate which then leads to the low in the rate of employment. There are many indigenous people who thinks that by having their kids adapt to the white educational system, indigenous tradition might be lost. There used to be more than 250 different indigenous languages have now lessened down to around 40.

After our research on this issue we thought one of the way that could tackle onto this educational issue would be to create a school that would prioritise the enrolment of indigenous students. Having groups of school with small number of aboriginal students would eventually lead to the protection in the cultural identity of indigenous people. There has been a lot of research and commitment done by the Australian government, yet there needs more to be done to solve this issue. If Australia could provide a sufficient care and hospitality to the indigenous, it would mean that the world would find a way to become more multicultural and diverse. Australia could eventually be a leader of that.

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## Opportunities blocked by our preconceptions ~ what can we do to change this? ~

A037 Hiyoshigaoka High School

**Keywords:** universal tourism, universal design, fieldwork, handicap, wheelchair, preconceptions, tour plan

### Introduction

The concept of “Universal Tourism” is a tour which everyone can experience, challenge and enjoy. Through learning about universal tourism in integrated study class, we realized that there ARE many preconceptions or fixed ways of thinking toward socially vulnerable people, including people in wheelchairs, people with a visual impairment and elderly people. Actually, some people suffer detrimental treatment due to such preconceptions; socially vulnerable people cannot choose their jobs freely and children with a handicap have to enter special-needs school. Although it is difficult for us to change governmental systems, we want to improve our society by changing how we think. Our goal is to eliminate or reduce preconceptions toward socially vulnerable people by creating and spreading new “Universal Tours” which everyone, including people with a handicap can experience, challenge and enjoy.

### Methods and results

To spread and deepen our knowledge and thinking on universal tourism, we conducted two types of fieldwork, entitled, “KYOTO fieldwork” and “TOKYO fieldwork” during this summer. In KYOTO fieldwork, we experienced tours for people in wheelchairs according to a map provided by Kyoto Universal Sightseeing Guide and checked whether universal designs on the map such as multipurpose toilets were still there or not. Through actually walking around the course with a wheelchair, we noticed many things which we would not have otherwise known.

In TOKYO Fieldwork, we visited Jissen Women’s University and discussed universal tourism with fellow students there. They made tour plans around Shibuya, Tokyo so that people of a wide range of ages could enjoy youth culture. From the fieldwork, we realized that it is important to think about universal tourism from our own view point as high school students.

### Conclusion

Through the two types of fieldwork, we decided to create new universal tours in Kyoto which only high school students would make and upload them to the Kyoto Universal Sightseeing Guide. We believe that these actions will lead to a reduction in preconceptions towards socially vulnerable people, such as people in wheelchairs not being able to enjoy a tour in the mountains and people with visual impairments not being able to enjoy beautiful sceneries. Furthermore, we can investigate whether or not our ways of thinking on people with a handicap change through these activities. We hope our actions will change not only our mind but also the minds of everyone in the near future.

KYOTO fieldwork



TOKYO fieldwork





# Libraries Can Change the Philippines

## An idea to address the educational problem in the Philippines

A 39: Seikyo Gakuen High School

Key words: Philippines, Library, Education, Library roles, Poverty, the Information poor, Vicious cycle

### 1. Introduction

This summer we went to Cebu in the Philippines and experienced a fieldwork at one of the slums. We found that there were many poorly educated people because of poverty. Many parents living in that slum couldn't get enough education, so they cannot get a stable job now. Therefore, they don't afford to send their children to school. Same thing happens to next generation. In this research, we investigated an idea to stop this vicious cycle and offer them learning opportunities.

### 2. Methods and Results

This research is based on a fieldwork at Cebu, an interview of a member of NGO working there, an inquiry for Japan Library Association and reading books, articles and online resources. Literacy rate in the Philippines is quite high, 96.4, due to school reforms conducted by government in 2011. However, we noticed that dropout number is also high. Using data from the National Statistics Office's (NSO) Annual Poverty Indicators Survey of 2004, the number of school-aged children (12-15 years old) not attending school is about 7.9 million, because of their economic situation.

Next, we give attention to the library role, because they are educational institutions that can be used by both children adults for free and they already exist. According to International Federation of Library Associations and Institutions, libraries should be aware of their roles especially for developing countries. Using libraries is a promising solution to address the problem we mentioned above.

### 3. Conclusion

Finally, we would like to suggest that using libraries could address the educational problems in the Philippines. Libraries can be used as local community center and can offer educational opportunities for free especially for adults who couldn't get enough education at their school age. Once adults understand the importance of education by making use of information obtained at libraries, they would send their children to school, that leads to stop vicious cycle. However, there is still a problem to consider; how to let them know the necessity of libraries and how libraries make efforts in those communities. We're going to continue this research by inquiring Philippines Library Association.

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## Involvement in community and child Growth

### -What we learned in Cambodia-

A40: Kaibara Senior High School

Key words: education, community, harmony

### 1. Introduction

We have been facing a lot of educational problems in Japan. Recently the number of children who refuse to go to school is increasing. According to the survey done by Ministry of Education, Culture, Sports, Science and Technology (MEXT), the major reason is not an external factor such as bullying but internal factor such as children's anxiety and apathy. Why do children get anxious or apathetic? We decided to search for the answer in relationships between humans and nature, where we assume children's stability of emotion is fostered. We visited Cambodia, where we found its environment is similar to that of Tamba.

### 2. Methods and Results

First of all, since we looked for the answer in nature, we assumed that there should be less children who cannot go to school in rural areas. According to the survey on school children in Tamba, however, the number of children who refuse to go to school is higher than the national average.

Secondly, we visited Cambodia, where we learned what education and schools are like. There are a lot of students who cannot go to school for financial reasons. There are not sufficient school buildings or teachers. Teachers are not skilled enough and don't have materials to teach with. The children there seemed willing to learn under such circumstances; they didn't look apathetic at all. Visiting rural area in that country, we found there is a society with everything in harmony: nature, industry, traditions, culture and education. Children help their parents, and all the adults in the village raise children together. Children grow up in the wilderness. Everything they do in their daily life seems to give them stable emotions.

Lastly, based on the survey by MEXT, we studied how children spend time with their family and how much they are involved in their community. We also had an interview with teachers at elementary schools in Tamba. We found more and more children spend their time alone on video games or SNS.

### 3. Conclusion

The results of these surveys and studies showed us that involvement in community and people around them has something to do with developing a stable state of mind in children: it is also necessary for children to change the way they spend time outside of school.

In Tamba, every elementary school has some programs in order to get involved in the community and natural environment: community school, outdoor classes, adventure activities. Some children are still absorbed in online games, where they can contact others without going out of their room. There is much to do in order to improve the situation. We are losing a society in harmony as we saw in Cambodia. We must not lose the richness in our mind at the sacrifice of rich lives.

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## The discovery of attractive Hokusetsu Sanda Senior High School

### ~Efficient utilization of information with the results of questionnaire survey~

A44: Hokusetsu Sanda Senior High School

High school, questionnaire, information analysis

#### Introduction

In 2018, the number of enrollment at Hokusetsu Sanda Senior High School drastically declined, and it was less than the capacity. It was so shocking that our school could not meet the quota because of the shortage of applicants. Therefore, we decided to consider the reasons of our school's bad situation. In order to investigate the detail situation, we used various statistics. The purpose is to use it efficiently and make our school attractive.

#### Methods and Results

This study explores how to improve our high school. At first, we built four hypotheses about the causes of the problem. First, the reason of decreasing number of students are declining birthrate. Second, another reason is bad means of transportation. Third, it is not unit system. Fourth, applicants were much more than the capacity last year. However, these are just a tentative view. Therefore, we need to gather information supported by facts. From the first to the third hypotheses, we used the information on the Internet to validate the hypotheses. For the fourth one, we decided to examine by means of questionnaires. The targets of our questionnaire are enrolled students, teachers, junior high school students and their parents who came to our open high school. First, we found that three hypotheses we built before were not the reasons. Therefore, we paid more attention to the result of our questionnaire, in which we asked the junior high school students what factors govern the choice of their high school. Then, surprisingly, we found that the reputation was not so important. Rather, there are much more significant points. They are club activity, school traditions, the atmosphere, school's features and learning system. When studying the good points of our school, we found some attractions that meet their needs of junior high school students. Those are "There are many earnest students ", and "most of the students creates good relationships". However, the result of the questionnaire also shows that junior high school students does not know those good points of our high school. Therefore, we consider that it is necessary to advertise our excellent points to junior high school students. Next, we focused on the characteristics of our school. According to the questionnaire to the current high school students, there are some dissatisfactions about our school. Those are "school regulations are strict" and " there are a few exciting school events". Therefore, we need to value students' autonomy. We emphasize students' autonomy leads to the great characteristic of our high school.

#### Conclusion

We analyzed the questionnaire of junior high school students who attended our open high school. We found that they choose their high schools based on three factors: a large variety of club activities, traditions of the schools, and school regulations. The strengths of our school are a variety of attractive club activities, many motivated students for higher educations, and several exchange students from foreign countries. We should change the advertisement in pamphlet and web page of our high school. We should improve a way of informing them at the events. Our old-fashioned school regulations are not attractive to them. We should discuss the way of carrying out open high school events and school regulations with teachers. Furthermore, we should examine schools that are increasing the numbers of applicants.

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## **Make plum agriculture a side business**

### **~ to protect the plum industry in Minabe Town~**

A48: Wakayama Shin-ai Junior and Senior High School

Key words: side business / aging of farmers / lack of successors / smart agriculture / weekend farmers

#### **1. Introduction**

Wakayama Prefecture accounts for 64% of the plum yields in the whole country. Moreover, 49% of them are occupied by Minabe Town. However, in 2017, the agricultural working population in Minabe Town has decreased to 70% of its peak, facing the problem of aging of plum cultivators and lack of successors. Umeboshi is a traditional and healthy food in Japan, and "Minabe-Tanabe no Ume system" is sustainable agriculture. The system is registered as World Agricultural Heritage. We have to pass down these wonderful things to our next generations.

#### **2. Methods and Results**

In the first place, 40% of the total population in Minabe Town are already engaged in plum cultivation, and it is not a realistic solution to increase the number of people there working as plum farmers. Therefore, what we focused on is weekend farmers who use 'rented farms'. It is said that 2 million people use such farms nationwide. Taking advantage of the good access of 2 hours by car from Osaka City, we decided to think about a solution on the premise of inviting people from urban areas. So, first of all, we visited Minabe Town and learned history of plum, plum farmer's present situation, plum processing methods, sustainable agriculture and plum industry, and Minabe Town. It turned out that Minabe Town has tourism resources of hot springs and rich nature. Therefore, we think that we can invite more people by making the most of them, and we've conducted interviews for people involved in tourism there. At the same time, we are currently preparing to propose to the Minabe Town Office the importance of making administrative leadership to create concrete environments to accept weekend farmers.

#### **3. Conclusion**

Our research is still in progress, but we come to understand some necessary things. We need to establish the method of smart agriculture which makes it possible to grow plums only on weekends, and to prepare accommodations which enables people in other areas to repeatedly go to Minabe Town. Therefore, a lot of investment is essential. It is necessary to prove that our solution is reasonable enough to cover a huge investment, for example by calculating the cost, even if it is rough. If our research can help solve the problems of Minabe Town, it can be applied to agriculture in other areas suffering from aging and lack of successors. By doing so, I hope that Japan's food self-sufficiency rate improve and it will lead to the solution of the food problem anticipated in the future.

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## High-quality education for all children Make advantage of Montessori education

A49: Konko Gakuen Junior & High School

Key words: High-quality education    Montessori education    SDGs    World terakoya movement  
Early childhood education    New Zealand(NZ)    cycle of poverty

### 1. Introduction

According to “Economics of academic ability” high-quality early childhood education is great cost performance in a long run, and it affects children’s futures. According to the 17 goals of SDGs, poverty is now a big problem all over the world, and it is difficult to slip out from the bad cycle of poverty. I suggest to cut off it by using early childhood education.

### 2. Methods and Results

【Hypothesis】 ①Children become independent by Montessori education.

②Children who take Montessori education to deepen what they learn in their house with their family.

【Methods】 ①I observed children in the Montessori kindergarten in NZ for 3 weeks, and interviewed a mother.

②I talked with children in the Montessori kindergarten in Japan about children in Cambodia, and I asked them to share my story with their parents, and take a questionnaire. (object: Children in kindergarten 5-6 years old / Respondent: 13 / question: what did you talk about with your family?)

【Result】 ① Children had acquired self-discipline and assertiveness by Montessori education.

②Many children talked at home and the stories were deepened by their parents.

### 3. Conclusion

- Montessori education produced a lot of genius. Montessori method, an education method in which children can choose their “work” have been done thoroughly in kindergarten in New Zealand, and it will develop non-cognitive ability. Montessori education thinks family education is important. Children's learning will deepen by discussing among parents and children and sharing ideas.
- There are differences of Montessori education between NZ and Japan, so I found it is no problem to change the shape of education along its culture.
- Montessori education is effective education, but many people says it is expensive. We must look for the way to provide affordable education to cutting off cycle of poverty.

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## Exploring possibilities on how to support Filipino children in a sustainable way

A50: Seishin Girls' High School

Key words: sustainable support, the chain of poverty and education

### 1. Introduction

Our school has been financially supporting poor families in the Philippines through Child Fund Japan for 40 years. We decided to visit them and find out if our financial help is supporting them well enough. When we saw the poor families there, we immediately noticed the chain of poverty and the lack of education. We suggest that we should disseminate the actual condition to others and increase supporters.

Furthermore, we thought about what high school students could do to cut the chain of poverty and the lack of education.



### 2. Methods and Results

In order to see the actual condition of the poor families, we visited Child Fund Center in the Philippines and saw the children we had been supporting. However, we found out that there were many other problems that stemmed from poverty, such as children's serious tooth decay.

We conducted a research on the rate of children's tooth decay in the Philippines and in Okayama, Japan. There was a difference in the data between the two countries, which I assumed occurred from the difference of financial and educational situation. As we found out that the rate of tooth decay in the Philippines was much higher than that in Japan, we compared the monthly income, the medical expense, the habits of brushing teeth and the guidance of oral hygiene between the Philippines and Japan.

Through the patterns that were suggested from the data, we found out the two main factors of the children's serious tooth decay. The major factors were their poverty and their lack of guidance of oral hygiene.

### 3. Conclusion

What is the most important support for the poor families in the Philippines are financial support and the opportunity of education. We decided to support poor families in Philippines by the following ways, besides our present financial support.

#### 【From the financial view point】

- Increase the supporters by giving the result of our survey on the actual condition of poverty.
- Collect tooth brushes from the other students in our school and bring send them to poor families in Philippines

#### 【From the educational view point】

- Send picture books on oral hygiene in English and Tagalog to poor families in the Philippines, which are made by students in order to educate children.
- We make a bright music video that children will listen to while they brush their teeth to show the proper way to brush.

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# Vietnam's Development

## Their serious garbage problem and the Japanese system

Tokyo Metropolitan Chihaya High School

Key words: Garbage disposal, Power plant, Industrial waste

### 1. Introduction

Now Southeast Asia has made a remarkable advance in economic development. However, along with economic development, garbage exhausted in large quantities has become a problem. In Vietnam, the rules for disposing garbage have not been decided yet, so the average family does not understand the correct way to dispose garbage. In fact, Vietnam's garbage disposal system needs to be improved.

In order to improve Vietnam's garbage problem, the following methods should be considered.

### 2. Methods and Results

Japan's garbage disposal method is better than all countries in Asia. Many Japanese companies help protect Vietnam's environment and disposal garbage. Vietnam should learn how to apply Japan's garbage disposal methods.

Examples:

Aeon is recycling and reusing the garbage waste oil and plastic bottles from its facilities in order to protect the environment.

Ichikawa Kankyo Engineering established Dai Dong Environment Solutions, a business that deals with resource circulation in Vietnam. Dai Dong Environment Solutions utilizes the disposal treatment facilities in Hanoi in order to manufacture and sell RPF. RPF is a type of fuel made from industrial waste. The company gives environmental consultations, helps with waste handling and recycles garbage in Hanoi.

Hitachi Zosen built the first Vietnamese power plant for making electricity from burnable waste. 75,000kg per day is incinerated. Electricity is made after the burnable waste is incinerated which provides enough electricity for 5000 households to use.

### 3. Conclusion

Vietnam has taken the first step to incorporate Japanese garbage disposal methods in order to improve its environmental pollution problems.

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# A Study on Local Businesses' SDG Activities from the Viewpoint of CSR

Tokyo Metropolitan Kodaira High School

Key words: Local businesses, SDG activities, CSR

## 1. Introduction

There are some big companies such as Bridgestone in our city, Kodaira. When studying SDG activities, our curiosity led us to the questions ‘What are these big companies doing for our society?’ and ‘Are they doing anything good for the environment?’ So, we started to study what kind of SDG activities such local companies are doing. To realize SDGs, these companies have already started to deal with some social and environmental problems as a part of CSR. For this project, our scope mainly focuses on the environment, which is the most important thing for anyone and anything on the Earth.

## 2. Methods and Results

We decided to study about our topic by making good use of the Internet, in other words, online study. We chose 4 companies which are closely related to Kodaira students' lives. They are SEIBU RAILWAY, IHI Groups, BRDGESTONE, and SAGAWA Holdings Group.

SEIBU RAILWAY: Converting electric light bulletin boards and lights in trains and stations into LEDs.

IHI Groups: Realizing low-carbon societies and reducing environmental burdens.

BRIDGESTONE: Building a sustainable society by balancing operations with the environment, being in harmony with nature, and improving the quality of life for all.

SAGAWA Holding Groups: Using “Super Rail Cargo” express railway container cars instead of trucks.

## 3. Conclusion

Three conclusions:

- We learned what the concepts of SGDs and CSR are and what they mean to our lives.
- We also learned about local companies' commitments to the social and environmental issues that surround them. Local companies are tackling various kinds of problems with much more efforts than we had thought.
- We would be willing to fulfill our CSR as corporate workers when we start working in the future.



# Students' Responsibility to Realize Educational Innovation

## No one will be left behind

Tokyo Metropolitan Koishikawa Secondary Education School

Key words: Active learning, SDGs

### 1. Introduction

In the future, as jobs are lost to IT and AI technologies, interpersonal skills will be required. Developing these skills will become increasingly difficult because of a growing apathy from today's students. Through experiences such as debate, Model UN, and studies abroad, we suggest a plan where students be able to build a society which develops interpersonal skills and where no one will be left behind.

### 2. Methods and Results

By using our own experience, we propose three effective ways to inspire active participation in class:

#### 1. Debate

Debate can be used to stimulate discussion among students. Students debate for or against social issues, regardless of their own personal opinion. They do research on, think about, and discuss these issues deeply and objectively.

#### 2. Model UN

Through Model UN, students can see things from many perspectives, learn consensus-building by talking about various global problems, and develop negotiation skills and a spirit of international cooperation.

#### 3. Tokyo Global Youth Camp, Wales Study Tour Program, Australia Program

Through these programs, we encountered many people who have various ways of thinking and exchanged ideas on topics that we do not talk about during our everyday school lives.

We have learned that communication with a variety of people is important because when we enter the real world we will have to negotiate with others to solve global issues. Our plan has a lot of similarities with the current way that the government is trying to innovate education. At our school, in our class Koishikawa Philosophy, teachers have started to stimulate active learning and are combining all fields of knowledge. Not all students, however, participate in active learning.

### 3. Conclusion

It is necessary for students to actively engage in their education. If we, the students, do not study and think actively, it won't matter if the government changes the education system. By changing our attitudes, educational innovation will be more effective, and we will be able to improve the abilities that will be required in the future.

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# “INHERITANCE” and “SENDING”

## To the World from Hakuo

Tokyo Metropolitan Hakuo High School

Key words: Traditional culture, Global

### 1. Hakuo's activities

Our school is going ahead with globalization. We do many activities to become “Global Leaders” of the future. These activities nurture personality and diversity in each student.

### 2. Traditional culture

Many of our activities are related to traditional Japanese culture. Our school is near Ueno and Asakusa, so we go there and learn about Japanese traditions. Our school has some clubs for Japanese traditions, such as *wadaiko*, *shamisen*, and single poems by 100 poets (*hyakunin-issu*). We also have “Japanese culture” class in 2nd grade. In addition, many students experience horseback archery (*yabusame*) and *mikoshi*. All students learn to play the *shamisen* in music class, so everybody can play it.

Through these activities, we deepen our understanding of Japanese tradition.

### 3. Global

Next, in order to share our culture with the world, we work with foreign people. For example, some students go to Australia during summer vacation and join high school and universities there. Also we sometimes accept foreign students. We teach them Japanese and learn English from them. And our school has teachers from overseas, whom we can talk with at anytime. Once a week we can talk with teachers in the Philippines during Online English class. In the school library, we can read and borrow some English books. We can talk about them with the foreign teachers. In addition, special classrooms such as the music room and art room are explained in English.

These above stories show our school's goal for globalization.

### 4. Conclusion

We inherit our traditional culture by learning and doing activities. And we share them by interacting with foreign people. Our school is aim to grow “Global Leaders” of the future.

# Should indigenous people be “traditional”?

## -taking Ainu and Hopi as examples-

Tokyo Metropolitan Minamitama Secondary Education School

Key words: indigenous people, Ainu, Hopi, assimilation policy, reservation, traditional culture

### 1. Introduction

The number of indigenous people is more than 300 million today. However, many of them were subjected to strict assimilation policies in modern times that are now abolished. Even so, some of their cultures and languages are dying out. I had a chance to visit the Hopi reservation while studying abroad in Arizona because one of my friends, who is Hopi, took me there. That is why I became interested in the way indigenous people live today. I focused on the Ainu in Japan and Hopi in the US to propose some alternative ways to achieve a better society for both indigenous people and the communities that interact with them. The definition of “indigenous people” in this research is “having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories.”

### 2. Methods and Results

From researching articles, it's found that the land and assimilation policies imposed on the Ainu stem from the ones imposed on native Americans. They were forced to move to certain areas and kept from inheriting their cultures. The questionnaire surveys that targeted students in Japan and the US showed the difference in education on indigenous people. In Japan, the ratio of students who have heard about assimilation policies was 45% higher. This means that the history of indigenous people is taught in more detail in Japan. However, another result revealed that Japanese students tend to have an image that Ainu live in traditional ways although their daily life is similar to that of a common Japanese person. The Hopi women I interviewed gave me new insights into how Hopi people think of keeping their culture and accepting tourists. Some tourists don't try to respect their customs, but they are also a source of income for people on the reservation. Tourism is an efficient way to educate people, about not only their traditional crafts and arts but also how they live today.

### 3. Conclusion

I reached the conclusion that the highest priority is to change people's mindset that “indigenous people are traditional”. To achieve this goal, Japanese school education should put an emphasis not only on history and culture but also on the fact that the way indigenous people live and the way they inherit their culture have changed. Then the prejudice against the Ainu or the native Americans will change as well. Indigenous cultures don't have to stay in a showcase in museums. They should be sent out to the world in new ways. Also, indigenous people in many countries have several problems in common, so they should get more chances to come up with international approaches that address their issues.

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