



**2021 PROGRAM**



**UEDA SENIOR HIGH SCHOOL  
GLOBAL STUDIES  
RESEARCH SHOWCASE  
ENGLISH PRESENTATIONS**

**FEBRUARY 6TH, 2021**

# WELCOME MESSAGE

On this mid-winter's day, the 6th of February, 2021, we would like to warmly welcome you to Ueda Senior High School's Global Studies Research Showcase!

This year is Ueda Senior High School's 120th Anniversary. Each day, for more than a century, students and staff have passed through our school gate, pictured on the cover of this booklet. Each day, over this period of time, our awareness of the world has broadened, technology has advanced, and there has been an acceleration of our global interconnectedness on an individual and national level.

Today, the world is a different place. 120 years ago, the height of technology included the telephone, the automobile, the airplane, and the radio. Between 1900 and now, personal cars and international air-travel became commonplace, and something called 'the internet' connected the entire world. It then became embedded in small, handheld, portable telephones with GPS that are also powerful computers with cameras that enable free, world-wide video calls, infinite personal entertainment and business opportunities, and even remote teaching!

Over the past year, we have seen ever more rapid change. A global pandemic halted international travel, people spent time confined to their homes and local areas, and many students and teachers around the world were not able to pass through the gates of their schools. However, thanks to the massive progress made over the past 120 years, most have been able to continue with socialising, shopping, entertainment and education, online while scientists work on treatments and vaccines. A remarkable development!

Humans are extraordinary. Knowledge and technology have blossomed over the past century or so, and many problems have been solved, while some long-standing issues remain, and new problems have been created by that same advancement.

During these past 12 months, our Year 2 students have been individually researching local and international problems that they would like to solve. They have focused on an issue that they have a personal interest in. The topics are wide and varied and include; artificial intelligence, gender equality, biomimetics, juvenile law, music education, micro-plastics, art, media, ethical consumption, agriculture and food safety, biomass power generation, economy, health and poverty, genetic testing, ethical business practices, and reducing medical costs.

Reading the students' abstracts and hearing their presentations I'm sure you will be heartened and reassured that the future generation of citizens and leaders care about their world and the people in it.

Several Global Studies II: English (GSII:E) students have volunteered to present their research in English today and we are pleased and grateful that you are here to join in the discussion that their presentations will generate. The four English Presentations that you will be hearing today are on issues they are concerned about. These include; the needs of foreign citizens living in Ueda, child welfare, town revitalisation, and international cooperation.

Our students are looking forward to sharing their findings and perspectives on how to care for humanity and achieve progress in sustainable development goals. They are also eager to hear your questions, thoughts and feedback. Thank you for joining us and making this a meaningful and memorable day in the students' development, and our school's history.

We hope you find inspiration in these talks today!

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**K. H.**

**Title:** A Multilingual App to Complete Support for All Foreign Citizens in Ueda

**タイトル:** 上田市在住のすべての外国籍市民を包括的にサポートする多言語アプリ

**Abstract:** Since 2014 the number of foreign citizens in Ueda city has been increasing. Many of the foreign citizens in Ueda have difficulty in their work and daily lives due to their Japanese language ability. In order to find out what services foreign citizens need in order to be more comfortable, interviews were conducted in several settings, and a city hall official was consulted. It was found that even though there are some free Japanese language classes in Ueda and other helpful services, they are not well known and information is not centralized, or available in all languages. As a solution, it is recommended that a multilingual app be developed by the city that can act as a centralized hub in order to make it easier for foreign citizens to connect with the information and services they need.

**要旨:** 2014年より、上田市の外国籍市民数は増加している。上田市の多くの外国籍市民は、言語の壁により、仕事や日々の生活に困難を強いられている。彼らが快適な生活を送るためにどんな支援を必要としているのかを知るため、私は外国籍市民の方4人と、市役所職員の方にインタビュー調査を行った。そこで私は、上田市には日本語教室やほかの良い支援があるにもかかわらず、情報がまとまっていなかったり、すべての言語で調べることができなかったりするため、あまりよく知られていないということに気づいた。また、日本語教室での日本語が話せない男子との出会いを通じて、支援の改善を再認識した。そこで、私は解決策として、今ある外国籍市民のための支援の情報をまとめた情報中枢アプリを作ることを提案する。

**キーワード:** foreign Citizens : 外国籍市民 a multilingual app : 多言語アプリ

## NOTES FOR Q&A



## H.S.

**Title:** Meeting the Individual Attachment Needs of Children Living in Nagano Nurseries: The Need to Privatise Foster Parent Training in Nagano to Increase Foster Families Numbers

**タイトル:** 乳児院で暮らす子どもたちの愛着形成のために  
—養育家庭を増やすための里親支援事業の民営化の必要性—

**Abstract :** According to Japan's Ministry of welfare, there are 45,000 children who can't live with their birth parents. About 39,000 of these children live in nurseries. Ueda Minami Nursery's mission is to fill all children's lives with love. Especially children who can't live with their birth parents. However, because of staff to child ratios, nurseries cannot always give enough individual care. This study explores problems with the Japanese foster-parent system and how to solve them. In-depth interviews with staff at Ueda Minami Nursery were conducted. The result of the interviews indicate that children's attachment could grow more when they are with foster-parents than when in nurseries. However, currently there are too few foster parents in Japan to meet the attachment needs of children in nurseries, and the Child Consultation Center is too busy to run regular training. Therefore it is recommended that Foster-Parent training and promotion should be outsourced and privatised so that enough foster parents can be reached and trained to meet the children's needs and fulfill the Nursery's mission.

**要旨:** 厚生労働省によると、生みの親と生活できない子どもは日本には45,000人いる。そのうち39,000人は乳児院や施設で生活している。上田市の「うえだみなみ乳児院」では、特に生みの親と暮らせない子どもに愛を注ぐために尽力しているが、子どもに対する職員の数が少ないため、個々に十分なケアができていない。この研究では、日本の里親制度の現状と、里親を増やすための取り組みについて説明する。うえだみなみ乳児院のスタッフの方へのインタビューでは、子どもの愛着は乳児院にいるより、里親の元で生活している時のほうがより発達することが分かった。しかし、子どもの十分な愛着形成を築ためには、里親の数を増やすことが急務である。また、児童相談所が多くの里親関連の全ての業務を執り行うには忙しすぎる。里親の数を増やすためには、行政と民間団体が連携し、今まで以上に里親制度の啓発と普及に取り組みとともに、里親支援事業の民営化業務の民営化を推し進めるべきである。

**キーワード:** attachment : 愛着 nursery : 乳児院 foster-parent system : 里親制度

## NOTES FOR Q&A



**A.K.**

**Title:** Regional Revitalisation in Nagano Prefecture:  
Reversing depopulation by Encouraging Youth  
Entrepreneurship

**タイトル:** 長野県の地域活性化

—人口減少を防ぐための若者の起業サポート制度—

**Abstract:** Population decline is a major social problem in Japan, and the population in Nagano prefecture is also declining. About 40% of Youth from Nagano move to urban areas or other prefectures for work and university, and this has been accelerating population decline in the prefecture since 2000. The purpose of this study is to explore how to reverse population decline in Nagano, and also how to revitalize Nagano Prefecture by encouraging youth from Nagano to stay, or to return and work in the prefecture. In-depth interviews with a teacher from Nagasaki Prefecture, and a review of articles, reports and statistics on government websites were conducted. Although there are no large companies in Nagano, the literature suggests several ways that youth from the Nagano countryside could become local entrepreneurs and generate income while enjoying their rural lifestyle and maintaining connections, rather than relocate.

**要旨:** 日本では人口減少が大きな社会問題であり、長野県の人口も減少している。長野市の若者の約4割が仕事や大学のために都道府県などに移住しており、2000年から都道府県の人口減少を加速させている。本研究の目的は長野県の人口減少を逆転させる方法と長野県の若者に地元での滞在や帰郷・就労を促し、長野県を活性化させる方法について考察することである。長崎県の教師への詳細なインタビュー、および政府のWebサイトの記事、レポート、統計資料の分析から、長野県には若者にとって魅力的な企業や大企業が少ないことがわかった。長野県の若者が地元で田舎のライフスタイルを楽しみつつ、地元の起業家になり、地域と繋がりながら収入を得る方法を提案する。

**キーワード:** declining birthrate and aging population : 少子高齢化

regional revitalization : 地域活性化 entrepreneurs : 起業家

## NOTES FOR Q&A



**K.M.**

**Title:** Changing the Economic Status of Developing Countries by Understanding their Actual Needs: Using our Knowledge and Technology to Provide Sustainable Support

**タイトル:** 開発途上国の経済状態を改善するためのニーズにあった適切な支援のあり方: 私たちの知識と技術を持続可能な支援につなげる方法

**Abstract:** There are currently approximately 137 developing countries (DCs) and, although many countries and organizations are providing support to DCs, the number does not appear to be decreasing. The purpose of this study is to understand why support is not changing the economic status of DCs and what can be done to help them become industrialized and self-sufficient. In depth interviews with university students and people who work in international affairs were conducted. It was found that support given is often not meeting actual needs. In order to help DCs develop it is recommended that development agencies first work to understand the DC's needs, and then assist them to become self-sufficient through appropriate training and resources. Further research is needed to understand how to measure needs and how to provide sustainable support, knowledge and technology that truly meets the development needs of nations Japan supports.

**要旨:** 現在、約137の開発途上国（DC）があり、多くの国や組織が支援をしているにもかかわらず、その数は減少していない。この研究の目的は、これらの支援が開発途上国の経済的地位の向上につながっていない理由と、開発途上国の産業化と自立を助けるために何ができるかについて考えることである。大学生や国際関係の仕事に携わる人々へのインタビューを通して、与えられた支援がしばしば支援国の実際のニーズを満たしていないことがわかった。支援を行う政府や団体は、支援国のニーズを理解し、適切な支援を行うことが求められる。そして、適切な支援を行うためのトレーニングと方策を通じて、支援国を自立へ導くことが求められる。支援国のニーズを的確に判断し、持続可能な支援を行うために、われわれの知識や技術をどのように提供すべきかについて、さらなる研究が必要である。

**キーワード:** Developing countries (DCs) : 開発途上国  
Sustainable support : 持続可能な支援

## NOTES FOR Q&A

**K. Y.**

**Title:** Visual Input for a Barrier-Free Japan

**Abstract:** About 15% of people in Japan are hearing impaired and this number will increase due to the aging population. In a voice-centric Japanese society, systems in place for hearing-impaired are not sufficient. This essay examines sign-language, subtitles and how to make Japan “barrier-free.” A review of literature on sign language and hearing-impairment was conducted. The literature suggests that for everyone to understand, sign-language and subtitles are needed on TV.

**Y. K.**

**Title:** One Method to Prepare Yourself for a Major Disaster

**Abstract:** There is a 70 percent chance that every 30 years an Earthquake could occur directly below the capital. In a worst case scenario, this would cause about 23,000 deaths and about 610,000 buildings to be destroyed. In addition, there is a risk of many secondary disasters peculiar to populous urban areas. The purpose of this study is to understand how to limit the extent of damage in the event of an earthquake directly beneath the capital. Interviews with City Hall officials and a literature review on disaster preparation were conducted. Additionally, a 3-question survey was given to 308 students in Ueda high school to determine their level of knowledge about disaster preparation. The results showed that more than 50% of students aren't aware that an earthquake could occur and aren't prepared for disaster. It is recommended that every household should stockpile daily foods to be prepared for a major disaster.

**I.A.**

**Title:** Reducing Burnable Garbage by 37.5% in Ueda City with Composting

**Abstract:** According to Ueda City office, in 2020 kitchen garbage accounts for 37.5% of burnable garbage in Ueda City. Although the overall amount of garbage is decreasing it is necessary to decrease faster as final disposal locations are almost full. A review of the statistics and recommendations on Ueda city's homepage and other sources was conducted. It was found that burnable garbage could be reduced by 37.5% if every household composted their kitchen waste. It is recommended, therefore, that composting should be widely promoted to reduce the burden on final disposal locations as soon as possible.

**I. G.**

**Title:** Safer, More Efficient Roads: Present and Future of Autonomous Driving by AI

**Abstract:** The number of traffic accidents in 2017 was 472,165, resulting in 3,694 fatalities and 580,850 injuries. There are many hopes for autonomous driving. It is expected it can reduce accidents, eliminate traffic congestion, and improve environmental problems. This purpose of this study is to understand the present and future of Autonomous Driving. In depth interviews with Mr. Muramatsu were conducted. It was found that currently the highest level of autonomous driving is not yet feasible. Additionally, even in a future of fully autonomous driving, drivers will need to have a licence in case of emergency and, therefore, cars will always need to be built for both manual and autonomous operation. Future research will need to be conducted to answer the many questions regarding responsibility for accidents, safety, and work with regards to autonomous driving.

**T. S.**



**Title:** The Importance of Critical Thought and Active Research to Counter the Negative Effects of AI recommendation Algorithms on Young People's Development

**Abstract:** Recently Artificial Intelligence (AI) has become an important topic in social media. For instance, it has become the subject of movies, books and the news. Society is now Information-intensive. It is impossible to keep up. AI is demanded by humans to help filter and recommend relevant information. However, the recommendation algorithms of AI that help can also harm. A literature review of on AI algorithms construction, benefits and dangers was conducted. It was found that AI algorithms are useful but make people passive consumers of algorithm's suggestions. This creates a 'filter bubble' and 'echo chamber' of viewpoints and information. These have effects on people of all ages, and especially on young people's development. It is recommended that humans should not only use the AI recommendations but also keep trying to research and judge information by themselves, and expose themselves to viewpoints that are the opposite of their own.

**M. M.**

**Title:** Possibility of Remote Medicine

**Abstract:** Although many countries are already using smartphones for remote medicine, many doctors and patients in Japan are still currently worried that remote medicine may be unreliable and unable to provide accurate medical examinations. The study aimed to understand and identify appropriate uses for remote medicine in Japan. A review of the literature on government and medical websites was conducted. Results indicate that remote medicine would not be appropriate for young people or some people in the older patients as they usually require in-person physical examinations. However, remote medicine would be useful for pregnant women's regular checkups, especially during this time of covid19 as it can help reduce possible infection. The technology already exists and is reliable and effective. Although remote medicine is at an early stage in Japan it is expected that once it is effectively used for appropriate cases, remote medicine will be adopted and used on a daily basis in the future.

**S. K.**

**Title:** Raising Awareness of SDGs in Japan and Promoting their Achievement by Exploiting Collectivism in the Culture

**Abstract:** Sustainable Development Goals (SDGs) are 17 interlinked goals for the ideal future of all humanity. According to the United Nations (UN) the awareness rate of SDGs in Japan is only 24 percent. 76 percent of Japanese people are not aware of the 17 goals we could pursue to improve the country. Japan is a collectivist society. The purpose of this study is to research how to use Japan's collectivist culture to promote the diffusion and achievement of the SDGs in Japan. A literature review on culture and globalisation in Japan and the world was conducted. The literature indicates that there can be cultural homogenisation issues created when attempting to strengthen cultural values for a purpose, but there are also ways to do so without creating problems. In conclusion, awareness of SDGs can be raised in Japan and progress made by respecting our own culture and spreading SDGs awareness through social networking sites and posters. Following that each individual can think about solutions to the SDGs issues in the culture around us.