Engaging Students in Co-creating a Sustainable Campus as a Living Lab

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Abstract

This activity report is about the sustainability activities of two student organizations at Sophia University. Universities have traditionally been expected to accumulate expert knowledge and produce cutting-edge scientific results, but as society and students have become more diverse, they have also become necessary to respond to diverse needs. In the field of sustainability research, there will be a need in the future for research that is oriented towards spaces created through dialogue among stakeholders, as well as open discussions and actions that go beyond existing frameworks. This report focuses on two student organizations dedicated to sustainability and shows the following information: i) background about the student organizations such as their purpose and history; ii) typical activities of the organizations and the students' voices; and iii) challenges they have faced.

The report begins by introducing KASA Sustainability, a bilingual undergraduate and graduate student-led organization established in 2015 with the mission of (re)connecting people to nature through understanding and appreciating complex and dynamic human-nature relations. KASA believes that creating a sustainable campus requires not just technological and financial breakthroughs but also a fundamental shift in mindsets and lifestyles on campus, hence its initiatives engage members in theoretical and empirical research and discussions that co-produce conceptual frameworks and innovative solutions for global challenges. Some KASA activities include field-based experiences such as farming/gardening and composting in addition to collaborations with other groups or institutions, readings on sustainability, and more.

The second half of the report focuses on University Innovation Fellows (UIF) Sophia. UIF Sophia is a student-led organization that is affiliated with the University Innovation Fellows program offered by Stanford University's Hasso Plattner Institute of Design (d.school). The aim of UIF is to empower students and faculty at higher education institutions around the world to become change agents at their universities by building their skills in innovation and entrepreneurship (I&E), creativity, and Design Thinking. UIF Sophia Fellows are engaged in a wide range of activities, from speaker events to Design Thinking workshops. Students have expressed how their participation in the UIF program has given them the creative confidence and leadership skills to create positive change in their communities.

Sophia University is a global university that emphasizes sustainability, but there is much room for improvement in the quality of education for sustainability. Beyond traditional and modern university education, dialogue-oriented seminars with innovative concepts among disciplines and stakeholders can be emphasized more.

Introduction

Diversification among students and in society has made university education more responsive to various educational needs and learning approaches. One of the most necessary approaches in universities today is education and learning for sustainability. The "living labs[1]" approach provides a sound basis for the holistic tackling of sustainable development themes for the usefulness of the living labs approach as part of transformative efforts (Leal Filho 2020, p.18). In this connection, Giesenbauer & Tegeler (2020) identify four distinct value systems of the university from traditional to integral ones: i) the traditional university preserves truths and insights from experts, and ii) the modern university emphasizes top-notch science in specialized fields. However, iii) the post-modern university uses action research and stakeholder dialogue. It prefers dialogue-oriented seminars to classic large-scale lectures and experiments with innovative concepts such as global classrooms. These learning arrangements aim at competencies rather than knowledge only (Rieckmann 2012) and they try to bridge the gaps between scattered disciplines and stakeholders. Furthermore, iv) the integral university is a learning lab that not only builds on post-modern university community values but also goes beyond them by allowing natural hierarchies to emerge and by allowing the open discussion of tensions, dilemmas, and trade-offs of sustainable development for a new kind of action-oriented mindfulness (pp.1092-1096).

When considering how university-educated people tend to have larger ecological footprints in their lives, these categories are suggestive because it is necessary for universities to develop curricula, campuses, and communities, and to transform into a more sustainable state marked by a strong awareness of sustainability. Various educational practices in different parts of the world will be helpful to Sophia University. At the same time, learning about Sophia University's practices could also be useful for other universities. Higgins et. al. (2014) introduces student activities and experiences at the University of Edinburgh. While the campus is becoming increasingly energy efficient in recent years, progress towards a more sustainable campus offers important program-related and personal learning opportunities for students, faculty, and staff. Students also recognize that interdisciplinary programs foster personal and transferable skills necessary to succeed in their studies and subsequent employability. In addition, the university's social sciences community has a wide-ranging role in understanding and engaging faculty, staff, and students as well as wider communities on sustainability and social equity as a construct and as a values issue. If universities are to successfully engage students, they must acknowledge students' potential as agents of change (pp.198-205).

This activity report focuses on two student organizations that engage in sustainability-related activities and shows the following information: i) background about the student organizations such as their purpose and history; ii) typical activities of the organizations and the students' voices; and iii) challenges they have faced. The first half is a report about the activities of "KASA Sustainability." KASA Sustainability's purpose is to understand the distinct yet interconnected nature of socio-

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[1] A "combined lab-/household system, analysing existing product-service-systems as well as technical and socioeconomic influences focused on the social needs of people, aiming at the development of integrated technical and social innovations (Liedtke et al [2012])," cited in Leal Filho 2020, p.19.

ecological relations. Because it is a bilingual organization, Japanese and international students collaborate for sustainability. One of the most visual outcomes they created was the "Sophia for Sustainability Map," which displays facilities and initiatives on the Sophia campus to enable the university community to make more environmentally friendly and sustainable choices. While KASA Sustainability has a wide range of other activities that have been successful at promoting sustainability on campus and nurturing sustainable practices, they are still limited in terms of student and stakeholder engagement, and there is a language barrier among Japanese-speaking and English-speaking members.

The second half of the report is about the activities of "University Innovation Fellows (UIF) Sophia." The UIF program is a fellowship offered by Stanford University's Hasso Plattner Institute of Design, or d.school, and aims to empower students at universities around the world to become agents of change. Student volunteers brought UIF to Sophia University in 2020, and since then the community of University Innovation Fellows at Sophia has expanded to include students from a variety of departments and backgrounds. The Fellows have participated in the training course offered by Stanford's d.school and have learned from each other. The main tool the students have acquired in the program is Design Thinking, which is a set of skills and a mindset for problem-solving. However, UIF Sophia currently faces significant financial challenges. The high program fee set by the host university in the USA requires fundraising and financial support from Sophia University and affiliated organizations.

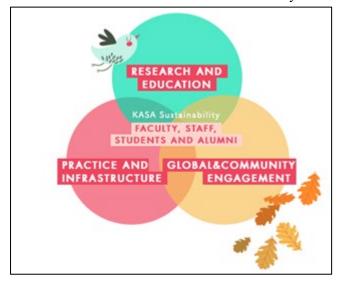## I. KASA Sustainability
1. Background
1.1. Purpose

KASA Sustainability is a bilingual undergraduate and graduate student-led organization formed in 2015 with the mission of (re)connecting people to nature through understanding and appreciating complex and dynamic human-nature relations. In KASA, the purpose is to understand the distinct yet interconnected nature of socio-ecological relations. Drawing on this understanding, members can engage in theoretical and empirical research and discussions that co-produce conceptual frameworks and innovative solutions for global challenges including climate change, equity and sustainability, hunger and poverty, and inequality. The research conducted incorporates field-based learning, collaboration with other groups or institutions, readings on sustainability, political ecology, development, and more. From such exchanges, final conclusions can further be transformed into journal articles, seminars, workshops, projects, discussion sessions, blog articles, and SNS posts to be shared with others.

1.2. History and Structure

The organization was initially established in 2015 as SEA (Sophia Environmental Association) when a group of undergraduate and graduate students came together to discuss current environmental issues and engage more students to become aware of contributions towards sustainability on campus. During the COVID-19 pandemic, there was a gradual transition from the more university-localized SEA

into a more inclusive and outward-reaching KASA Sustainability that connected and collaborated with other institutions through digital means. As a result, KASA has since then adapted to allow for more online opportunities and activities including online international forums and conferences. These developments have further expanded KASA's membership to individuals of higher education throughout the world.

The name KASA has multiple interconnected meanings. In Latin languages, "Casa" is a word for "house/home." Likewise, KASA is a home where members with distinct backgrounds, skills, and expertise can come together to understand and practice sustainability, as well as to learn to be sustainable beings. Kasa (傘) also means "umbrella" in Japanese. The umbrella is made by gathering several spokes together that support each other to protect people from the rain. As an umbrella structure, at KASA, members are all connected to the core belief that "humans are not in control of nature." Thus, sustainability can only be realized when all beings recognize the delicate and complex human-nature interactions and honor the diversity of nature as it is.

Considering KASA Sustainability is officially based within a university, its definition of a "sustainable campus" encompasses three areas that are central to the missions of higher education: 1) Research and Education; 2) Practice and Infrastructure; 3) Global and Community Engagement.

At the heart of these interrelated areas lies all the relevant stakeholders to which the three areas apply, which are faculty, staff, students, and alumni. While keeping in mind the core belief that humans are not in control of nature, a "sustainable campus" can be realized when the community recognizes and celebrates the complexity and dynamics of human-nature interactions. Through research, education, practice, and global/community engagement, KASA Sustainability creates an arena where all faculty, staff, and students work together and learn to be sustainable beings.

1.3. Present Status

As of February 2023, KASA Sustainability consists of approximately 10 undergraduate students, 10 graduate students, and many international members. In addition, a number of university faculty and staff members are part of the KASA community. One of KASA's core values includes diversity, which is represented in its members that come from varying cultural backgrounds and more than 5 different academic departments within Sophia University.

Unlike many university organizations, KASA Sustainability does not charge membership fees. Instead, it finances its activities through financial grants received from the university, such as the Extracurricular Student Activity Fund Award (課外団体活動助成金) which grants ¥100,000 ($1,000) to extracurricular organizations that partake in activities related to world peace or climate action. KASA has received this grant for two consecutive years and has been using it to fund their projects.

KASA activities were created based on the intersection of the three areas defined as a sustainable campus. The idea behind these initiatives is that creating a sustainable campus requires not just technological and financial breakthroughs but also a fundamental shift in mindsets and lifestyles on campus. The activities are summarized as follows:

1. Sustainable Campus Forum
2. Campus Farming and Composting
3. Learning from Others

2. Highlighted Activities
2.1. Student Initiatives
Sustainable Campus Forum (SCF)

SCF seeks to engage faculty, staff, and students in the sustainable campus movement by creating an open and bilingual forum where every university constituent can bring in concerns and ideas for a sustainable campus. It functions as a bridge between the decision-making body of the university (administration) and the university constituents. The main goal of this forum is to share innovative ideas and approaches to promoting campus sustainability based on a sense of urgency of the current climate crisis. The forum discusses what makes a campus sustainable by sharing different perspectives and dimensions of sustainability, empowering students' participation in sustainable initiatives and decisions within the university, and raising awareness related to global problems to take action on campus.

The first forum was held online in July 2021 as a pilot project. Around 30 faculty, staff, and students participated and discussed current problems and solutions of campus sustainability in addition to infrastructure-related problems/solutions and movement-related problems/solutions. The second forum was held in the same year in November with a similar format and theme. The third forum was hosted in collaboration with the Office of Sophia Sustainability Promotion in April of 2022 to continue discussions about campus sustainability. The forum enabled participants to exchange opinions on what actions can be taken and to enhance opportunities for collaboration by gathering a community of like-minded people. The event hosted around 40 participants ranging from faculty, undergraduate, and graduate students from various departments of Sophia University.

A survey was taken after the third SCF, and results show that 93% of participants would like to participate in more events like this forum in the future. Some mentioned that they attended the event because they were interested to see how different actors within campus felt about sustainability and also to find out how they themselves can become more active in the movement towards a more sustainable campus. Concluding thoughts on the event ranged from comments regarding the desire for more

discussion time and questions on how to increase the engagement of those not interested in sustainability on campus.

KASA hopes to create an environment where stakeholders on-campus, including students, faculty, and staff can come together to discuss, create awareness, and exchange ideas on ways to promote a lifestyle aligned holistically with the Sustainable Development Goals. Future plans for the Sustainable Campus Forum consist of more focused discussions that dive deeper into specific topics of sustainability. This might open doors for new projects and ideas to be implemented directly on campus.

Campus Farming and Composting

KASA started the campus farming project in 2015 on a small scale by growing plants in pots near the corner of one of the university's roof tops. After nine months of negotiating and communicating with Sophia's Property Management Office, KASA was given permission to plant on campus soil in March of 2021. Despite the lack of experience in farming and gardening, the project served and continues to serve as an enriching and engaging activity for its participants. KASA members took the initiative to not only learn hands-on the difficulties that many farmers face today as the global weather becomes increasingly unpredictable each year, but to also revive members' connective awareness with the environment. Now that a growing percentage of the youth generation is becoming less in touch with nature and spending more time with their digital devices, it is easy to lose sight of society's crucial reliance on nature and the importance of its well-being.

Promoting environmental education and awareness is crucial when it comes to building a sustainable campus. KASA's farming and composting project originated by taking into consideration that information-based education is not always effective. Therefore, the farming and composting initiative strives to unite faculty, staff, and students to reduce Sophia University's carbon-footprint and to create a cycle of recycling.

The farming activities take place primarily during the summer and winter months. Upon researching which plants grow best in which season, members brainstorm a basic blueprint of the garden. They take into account factors such as companion plants, sunlight, and the management of space before finally obtaining and sowing the seeds. Once the seeds are in the soil, students, professors, and even security guards contribute to the watering and mending of the garden. When it is time to harvest the garden, the members who were involved in the farming often gather together to celebrate and share the food among themselves.

In addition to the campus gardening, two KASA campus compost systems were launched in August of 2021 in order to promote resource circularity within campus. Every autumn, leaves all around the campus are collected and thrown away into garbage disposal fields only to become wasted piles of unused leaf biomass. To make use of the fallen leaves, KASA members developed a system in collaboration with Sophia's cleaning staff to collect the leaves throughout campus. These fallen leaves are brought to KASA's leaf composting site where they are mixed with other compost-enriching components to decompose and be turned into usable compost for KASA farming activities. This project

also includes the recycling of organic waste scraps from the university's cafeterias. KASA members collect the food scraps and transfer them into a different organic composting system.

Learning from Others and Sharing

KASA values learning not only from individual research but also learning from others in the community. By actively participating in local and international conferences, writing and publishing papers, and organizing workshops, members of KASA get many opportunities to enrich their knowledge in sustainability, engage with a like-minded community, improve life skills while enjoying experiential learning, and share what they have learned through research and action. Information is shared through a variety of platforms, from academic papers and publications to social media (including KASA's Instagram, website, and blog).

Furthermore, KASA members, particularly graduate students, have helped to facilitate many symposiums and have collaborated with external institutions and individuals. Examples of such occasions were the Environmental Change Workshop Series and the creation of the Sophia for Sustainability Map. KASA strives to continue creating opportunities for engagement between KASA members and outside communities in the future.

Environmental Change Workshop

KASA Sustainability's Environmental Change Workshop series is held twice a semester and focuses on topics such as climate mitigation, agrarian and environmental change, agriculture and food, and other sustainability topics. The series consists of a reading seminar followed by a speaker seminar that encourages researchers and students to learn and share their knowledge. This workshop series is supported by Sophia University's Graduate Program in Global Studies and is part of the global Political Ecology Network. Through the workshops, KASA aims to create a conducive space for researchers and students to exchange ideas, discuss, and promote research. In addition, it aims to expand graduate student access to resources to collaborate, support, and publish about climate change mitigation and food research. The theme for Fall 2022 was "Climate and land (in)justice: inequalities, intersections, and opportunities for justice in Southeast Asia." Professor Saturnino "Jun" Borras was invited as the guest speaker for the speaker workshop, and he spoke on the topic of climate change and land politics.

Sophia for Sustainability Map

The Sophia for Sustainability Map was created with the intention of helping students, faculty, and staff at Sophia University to make environmentally friendly and sustainable choices on campus. This initiative started when students from the Environmental Science class and the Ecology Club at the University of Portland as well as KASA Sustainability members and the Agrarian Societies class at Sophia University partnered up to explore a variety of climate change adaptation activities to be implemented on both campuses. Small groups of students between the two universities then collaborated in creating an action proposal depicting how sustainable actions contribute to climate

change adaptation on campuses. The idea of the map was the winning proposal and the group was given monetary aid to pursue the project and implement it in both campuses. The map displays both the facilities on campus such as the water refilling stations and umbrella rental stands. It also displays student initiatives, such as the farming and composting initiative and special events related to sustainability. KASA follows the belief that the continuation of purposeful decisions in one's daily lives can bring forth positive change in the local community and surrounding natural environments.

2.2. Students' Voices

KASA Sustainability ensures that all initiatives are open and available to any university constituent, regardless of previous background knowledge on sustainability and whether they be student, faculty, or staff. This allows for a distinct and unique experience for every participating individual that, as a result, is impacted and influenced in different ways.

Many KASA members who have participated in the farming activities have said that they felt a sense of community and solidarity when helping out with the garden, especially since the activity brings in individuals from various cultures and backgrounds to come together towards a common goal. When members are mending the garden or watering the plants, professors, security guards, and curious students often stop by to engage in conversations about the gardening activity and the organization's initiatives on campus. These interactions have led to rare conversations with various individuals in addition to innovative ideas for collaboration with other student organizations working on similar aspects of sustainability. Most KASA members who participate in the farming initiative also take part in the composting activities, and many comment that their appreciation for food consumption and a zero waste lifestyle has increased significantly after personally playing a role in the growth, consumption, and decomposition of their own food.

Likewise, KASA's discussion-based initiatives, such as the Sustainable Campus Forum, and the symposiums and events to learn from others have helped to open the minds of participants to new perspectives of sustainability. KASA has provided a safe and supportive space for members to discuss and exchange ideas regarding the multiple layers of sustainability and its applications. These discussions have informed, inspired, motivated, and challenged many participants to start taking the first steps towards applying their passions and interests into their local communities. The farming/composting initiative and the Sophia for Sustainability Map are examples of students acknowledging their interest in sustainability and creating positive impact in their communities.

3. Future Challenge
3.1. Challenges

In recent years, Sophia University has been actively pushing towards becoming a more sustainable campus as the need for immediate climate action increases. Sophia's sustainability initiatives include joining the Renewable Energy University League of Japan in 2020 (a group that aims to achieve decarbonization by promoting the use of 100% renewable energy at universities in Japan)

and establishing the Office of Sophia Sustainability Promotion (OSSP) in July 2021 to aid in promoting initiatives on campus related to the Sustainable Development Goals. Since its establishment, the OSSP has been actively involved in installing refillable water bottle stations across campus and engaging campus constituents on topics of sustainability by sharing information on its website and social media platforms.

Despite the growing awareness of environmental actions and sustainability within campus, one of the major challenges organizations like KASA Sustainability face is the fact that there still appears to be a lack of involvement and engagement from the majority of the university constituents in taking initiative to bring positive change to the campus environment. Although there are many opportunities to talk about what steps can be taken to push the university community to accept and incorporate a sustainable mindset, actions that apply and bring these steps to life often lag behind.

Furthermore, KASA Sustainability strives to be a bilingual student organization to accommodate both Japanese and English-speaking members. However, most of KASA's activities are conducted in English because it is the language of preference for the majority of its members. Sophia University is well known for being an internationally recognized institution and thus hosts many students from international backgrounds. Nevertheless, the majority of the student body is made up of Japanese students, and it can be challenging for some of them to actively participate in English-speaking environments. Though there have been a small number of Japanese students who have participated and engaged in KASA's projects and initiatives, the language barrier continues to be an ongoing obstacle.

3.2. Potential

Sophia University's shift of focus has greatly influenced its students to be more conscious about what kind of impact they have on campus and how they can contribute to the mission of a more sustainable environment. Not only have initiatives from the Office of Sophia Sustainability Promotion (such as the installation of water bottle refill stations and the promotion of information regarding sustainability-related activities on campus) been well received by the student body, but many student organizations related to sustainability or who host activities promoting the Sustainable Development Goals have seen an increase in the number of participating members.

Apart from KASA Sustainability, there are many other student-led organizations at Sophia that are actively striving to increase environmental and sustainability awareness in their surrounding communities. Extracurricular clubs and organizations such as Green Sophia, Sophia Refugee Support Group, Sophia Vegan Society, and CocoEco take action not only within campus but also outside by hosting workshops, raising awareness on social media, and increasing the outreach of information regarding what it means to be sustainable and what individuals can do to further contribute to this significant global shift. The growing involvement in sustainable actions and the spread of habits among the overall student body serve as a positive sign that the efforts of various student-led organizations like

KASA Sustainability are making a difference and are succeeding in creating positive change on campus and beyond.

3.3. Request to University

Sophia University has shown dedication to shifting its focus to align with greener values in recent years, and this commitment has been passed onto its student body. Referring back to KASA Sustainability's definition, a "sustainable campus" can only be achieved when relevant stakeholders (faculty, staff, students, and alumni) play a role in recognizing and celebrating the complexity and dynamics of human-nature interactions. In other words, it is crucial that all university constituents have a voice in transforming the university campus to align with newer and greener expectations. Given the proactive nature of many student organizations in Sophia University, it is clear that students are eager to contribute more towards initiatives supporting a sustainable campus. By frequently granting opportunities for students to express their ideas and engage with faculty and staff in decision-making, it would not only help the university to better understand and nurture the full potential of the student body, but it would also prove to be a valuable learning experience for students passionate in contributing efforts to improve the campus community.

II. University Innovation Fellows (UIF) Sophia
1. Background
1.1. Purpose

The University Innovation Fellows (UIF) program is a fellowship program offered by Stanford University's Hasso Plattner Institute of Design (d.school). UIF aims to empower students and faculty at higher education institutions around the world to become agents of change on their campuses by nurturing skills in innovation, creativity, entrepreneurship, and Design Thinking. Every year, approximately 200 students from universities around the world participate in an intensive six-week training that equips UIF candidates with skills in innovation and entrepreneurship (I&E) to find solutions to improve their campus ecosystem. Apart from offering online training, the UIF program also organizes in-person meetups for Fellows to connect from around the world, provides year-round mentor support, and enables access to numerous tools and resources. By doing so, UIF equips students with the necessary knowledge and skills to navigate complex problems.

1.2. History and Structure

The UIF program was established in 2012 as part of the National Center for Engineering Pathways to Innovation (Epicenter), which was funded by a five-year grant offered by the U.S. National Science Foundation. Epicenter was directed by Stanford University, Stanford Technology Ventures Program (the Stanford Engineering Entrepreneurship Center), and VentureWall (formerly known as the National Collegiate Inventors and Alliance), all of which came together with a shared mission to promote innovation and entrepreneurship in higher education. After the period of the National Science

Foundation grant ended in June 2016, the UIF program was brought under the Hasso Plattner Institute of Design (d.school) at Stanford.

Since its establishment, the UIF program has trained approximately 2,668 students from 302 universities and colleges around the world. Partner schools include other North American institutions, such as MIT, the University of California Berkeley, and Columbia University, as well as institutions in other parts of the world, such as Peking University in China, Jawaharlal Nehru Technological University in India, and University of Twente in the Netherlands. University Innovation Fellows, also referred to as UI Fellows, range from undergraduate to graduate students, and they come from a wide range of academic backgrounds spanning the sciences and humanities.[2]

The UIF program consists of a six-week training program that is conducted entirely online by Stanford faculty members, designers at the d.school, and former University Innovation Fellows. During the training, which is typically carried out from the end of August to the beginning of October, each cohort of UIF candidates work together on weekly tasks. They learn how to create in-depth analyses of their campus ecosystems, identify opportunities and needs around them, apply problem-solving and business methodologies such as Design Thinking and Lean Startup to create solutions that meet those needs, develop lasting connections with their stakeholders, and communicate their ideas effectively to students, faculty, and administrators.

Following the successful completion of the six-week training, UIF candidates are formally named "Fellows" and launched into their communities to create lasting and positive change at their home-institutions. They are encouraged to implement the projects that they developed during the training. Fellows from around the world have engaged in a wide range of activities. These include workshops and events, creating makerspaces, establishing student organizations, hosting hackathons and makeathons, organizing first-year engagement sessions, holding talks and speaker series, and collaborating with faculty to develop new classes and curricula. Some Fellows also engage in national dialogues to enhance higher education in their own countries and to advocate for policy changes to provide more opportunities for students to learn entrepreneurial mindsets and problem-solving skills to tackle today's complex challenges. After implementing their projects on campus and contributing to positive social change in their communities for several months, Fellows are invited to attend the annual UIF Silicon Valley Meetup at Stanford University the following March.

In the fall of 2020, a group of four students from Sophia University participated in the UIF program, making them the first students from a Japanese higher education institution to participate in the program. At UIF Sophia, the Fellows have been working closely with students, faculty, administrators, and other stakeholders to create opportunities where members of their community can unlock their creative potential and develop an innovative mindset. Fellows at Sophia have facilitated Design Thinking and youth empowerment workshops, organized events aimed at creating a more sustainable campus, hosted speaker series and career talk sessions, created learning programs, and

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[2] University Innovation Fellows, Hasso Plattner Institute of Design at Stanford.
https://universityinnovationfellows.org/about-us/program/

fostered collaboration among different stakeholders to co-create innovative solutions for challenges on campus and beyond.

1.3. Present Status

Since 2020, sixteen students from six different faculties at Sophia University have received training and been named University Innovation Fellows. Currently, students come from the following faculties: Faculty of Foreign Studies, Faculty of Global Studies, Faculty of Human Sciences, Faculty of Liberal Arts, Faculty of Law, and Faculty of Science and Technology. In addition, a number of faculty members are part of the UIF Sophia community, and they play an active role as supporters, mentors, and advocates of the Fellows as they work on their projects.

The UIF program has an application fee of $4,000 for each team of 1-4 students. Students usually apply as groups of 4 or 8 people. In addition to the program fee, there are the costs of participating in the annual Silicon Valley Meetup (that is, while there is no participation fee, Fellows are responsible for covering their own airfare and accommodation during their visit). UIF Sophia Fellows frequently apply for grants from the university to fund their program application and projects.

As mentioned earlier, UIF Sophia Fellows are involved in many different activities. These range from Design Thinking workshops to speaker events that are aimed at empowering students to become active changemakers and informed citizens in their communities. Fellows at Sophia have worked on the following projects:

1. Establishing RISE (a youth empowerment organization)
2. RISE Together for Change Workshop
3. Spark the Change: From Idea to Action Workshop
4. SDGs x Innovation Sparker Event
5. Sophia International Society

2. Highlighted Activities
2.1. Students Initiatives
RISE Together for Change Workshop

On April 22, 2022, the 2021 cohort of UIF Sophia partnered with members of RISE to deliver a 40-minute workshop for more than 60 high school students at Seisen International School in Tokyo. The workshop was part of Seisen International School's annual TEDx event, and it built on the theme of that year's event: "Be the Butterfly." The theme was based on the butterfly effect – the notion that even our seemingly small and insignificant actions can enact large-scale, meaningful change around us.

UIF Sophia Fellows designed the workshop, "RISE Together for Change," to be grounded on the following three pillars: self-confidence, actionable steps, and sense of solidarity. The aim of the first pillar, self-confidence, was to inspire confidence within participants by helping them recognize their skills, strengths, and the potential that lies within them. The aim of the second pillar, actionable steps, was to guide students in identifying the steps they can take individually and collectively to solve

problems impacting their lives. And finally, the aim of the third pillar, sense of solidarity, was to nurture a sense of community and connection among students by reminding them that they are not alone in taking a step forward to make a difference in the world.[3]

Spark the Change: From Idea to Action Workshop

On June 11 and July 9, 2022, UIF Sophia conducted a workshop called "Spark the Change: From Idea to Action" for approximately 30 students at both Sophia University and Reitaku University.[4] The workshop emerged from a recognition that many university students are constantly taking in new information and knowledge through classes, however, they are rarely given the chance to apply and put what they learn into practice. Sophia UIF Fellows therefore designed this workshop with the intent of shrinking the gap between theory and practice and empowering students to move from being passive bystanders to becoming active change makers who use their skills and knowledge to create social change.

Through the 90-minute workshops, participants learned how to utilize Design Thinking mindsets and methods, as well as how to apply their creativity and individual knowledge towards collectively solving challenges they face in their university lives. The objectives of the workshop were as follows: 1) to gain confidence for taking action towards positive change; 2) to identify skills and resources already at hand; 3) to clarify the steps they can take towards meaningful change; and 4) to nurture a sense of belonging to their community by working and collaborating together in changemaking.[5]

SDGs x Innovation Sparker

On October 29th and 30th, 2022, a group of students from the 2021 cohort of UIF Sophia Fellows hosted the SDGs x Innovation Sparker – a bilingual event aimed at fostering creativity and collaboration among students, faculty, and staff for creating a more sustainable campus.[6] This event was funded by the Sophia Student Challenge Support Grant, and it was held in English (October 29th) and Japanese (October 30th). Over the two days, the event brought together approximately 90 students, faculty, and staff members from more than 15 departments in Sophia. Participants applied Design Thinking tools to the SDGs framework to come up with ideas and solutions for achieving zero waste and circularity on campus. The main SDGs that they targeted in their event were the following: SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), SDG 14 (Life Below Water), and SDG 15 (Life on Land).

The event consisted of three main components: a keynote presentation by a guest speaker, a Design Thinking workshop, and an idea competition. In the first part of the event, participants listened

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[3] UIF Sophia, "RISE Together for Change." https://www.uifsophia.com/rise-together-for-change
[4] Reitaku University, "Workshop 'Spark the Change: From Idea to Action' was held." https://www.reitaku-u.ac.jp/news/research/1776338/
[5] UIF Sophia, "Spark the Change: From Idea to Action." https://www.uifsophia.com/spark-the-change
[6] UIF Sophia, "SDGs x Innovation Sparker." https://www.uifsophia.com/sdgs-innovation-sparker

to keynote presentations from professionals working in organizations promoting the circular economy. In the second part, participants engaged in a Design Thinking workshop that focused on identifying and addressing waste problems on campus framed as the following challenge: "How might we circulate resources and prevent waste from being generated on Yotsuya Campus?" They explored human-centered needs and discovered opportunities for change while simultaneously considering the impact on the natural environment. They also learned how to turn their ideas into physical prototypes to test with others. Finally, in the third part of the event, participants presented their ideas in front of a panel of judges. The judges included professors from faculties ranging from the Faculty of Science and Technology to the Faculty of Economics, and a staff representative from the Office of Sophia Sustainability Promotion.[7]

Following this event, the team of UIF Sophia Fellows designed a Design Thinking-based workshop facilitation guide called the "Innovation Sparker." The facilitation guide consists of eight modules within six workshop spaces. Each module invites the user into a different space within the Design Thinking process and introduces an activity that can be implemented alone or in combination with activities introduced in other modules. When all the activities are combined, the result is a 2-hour (120 minutes) workshop. During the workshop, participants identify and define problems in their communities as opportunities for creating impact. By coming together to discuss issues of common interest, participants co-create a safe space where new insights and creative ideas are formulated and expressed. The toolkit was designed specifically for people who wish to lead workshops for university students. While the workshops are envisioned primarily for undergraduate students, they can be adapted for younger or older students depending on the topic or challenge chosen. The toolkit can be used for workshops for groups of 10 to 30 students.[8]

2.2. Students' Voices

Members of UIF Sophia have expressed how the UIF program has provided them with the mindsets and skills to become positive changemakers in their communities. The following are testimonials by students from a range of different departments and years:

Faculty of Law '22: "I can use what I learned to bring meaningful and positive change to society. Moreover, being able to connect with like-minded students from all over the world has empowered me to explore my passion and take on new challenges."

Faculty of Science and Technology '24: "Although I've always enjoyed solving problems, I realized I didn't take the time to truly empathize with and understand those who were personally

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[7] Find Sophia, "Sparking Creative Solutions for a Sustainable Campus." https://findsophia.jp/find-sophia/5755/

[8] UIF Sophia, "Innovation Sparker: A Design Thinking-based workshop by UIF Sophia." https://www.uifsophia.com/toolkit

affected by them. UIF has helped me to gain a new perspective that makes coming up with solutions much more meaningful and satisfying."

Faculty of Global Studies '24: "I joined UIF because I didn't just want to sit around waiting for someone else to change the campus environment. I was looking for the opportunity to become a person who could empower others to become changemakers by creating almost a domino effect, and UIF gave me the perfect opportunity and skills."

Faculty of Liberal Arts '24: "As an introvert, I used to think that someone like me could never be a leader of change. However, UIF helped me realize that no matter what role I play, I can create positive changes by just being who I am. With my newly acquired design thinking skills from the UIF program, I hope to continue improving the campus ecosystem and students' campus life with my team."

Faculty of Human Sciences '24: "The UIF program has gifted me with a new group of ambitious peers with diverse interests and expertise as well as a new innovative framework of thinking and working. My experience with UIF has enabled me to explore my interests and to step out of my comfort zone by becoming more responsible, cooperative, and open-minded. It has also helped me to boost my entrepreneurial skills through the implementation of projects with team members and different stakeholders to improve our campus experience and ecosystem. I hope to continue addressing pressing needs on campus and beyond with my team, and I look forward to seeing the UIF Sophia community continue to grow and make positive changes on campus."

3. Future Challenge
3.1. Challenges

One of the greatest challenges currently facing UIF Sophia is its lack of financial support and funding. The upfront cost to participate in the program is difficult for many students to cover on their own. Due to these financial challenges, most Fellows around the world are sponsored by their university, a given department, or their university-affiliated I&E centers (e.g., an incubator space or research institute). Others have found ways to secure sponsorships outside of their college or university. However, UIF Sophia has faced difficulties with finding sponsorships and securing a source that can provide a steady stream of funding. As a result, Sophia students have been responsible for covering the majority of the UIF program fee and the Silicon Valley Meetup travel and accommodation costs. In addition, they have had to rely on short-term grants offered periodically through the Sophia Center for Student Affairs and public crowdfunding to fund their projects. This lack of a sustained source of funding and financial leeway places the burden of incurring the high costs of the UIF program upon each individual student, which can limit or exclude some students from joining UIF. It also poses

limitations on the kinds of projects that Sophia Fellows can work on and the timelines at which these projects can be implemented.

While there have been discussions and attempts to institutionalize UIF Sophia within the university as a way to ensure the long-term sustainability of the fellowship program at Sophia, it is still uncertain whether this is a viable possibility. Given that UIF Sophia is still a young organization at Sophia and its presence is still not widely known to the university community, Sophia Fellows must continue to build their organization's brand and deliver tangible results through their projects to garner greater credibility and legitimacy. This will likely take time, however, the future of UIF Sophia is promising. A growing number of people within and outside Sophia University are beginning to take notice of UIF Sophia's activities and projects. Through this growing recognition and support for UIF Sophia, new avenues for funding might emerge.

3.2. Potential

We live in a world of growing uncertainty and complexity where we are being confronted with "wicked problems" like climate change and persistent poverty that are extremely difficult to solve. In the midst of these complex global challenges, many young people in Japan and around the world have expressed feeling a sense of powerlessness – that is, a feeling that their personal actions are insignificant or unable to effect meaningful change. However, there is great potential for youth to contribute positively to their societies and the world. The University Innovation Fellows program recognizes this potential of youth to enact positive social change when they are given the right tools and mindsets. Design Thinking is one of the tools that UIF imparts to students in order to help them approach today's complex problems in new and creative ways.

The Design Thinking process consists of five main components: Empathize, Define, Ideate, Prototype, and Test or Implement. In each of these phases, students learn how to understand the context and the needs of the people for which they are designing, to identify the core problem and its surrounding context, to develop creative solutions, and to create prototypes to test their solutions. By incorporating Design Thinking education and training into the university curricula, students will learn to become more engaged citizens who are empowered to care for their communities and to develop a sense of agency for solving the problems around them. The positive potential of the UIF program is manifold. Most importantly, it gives students the opportunity to learn how to apply Design Thinking in everyday settings, and it equips them with many of the foundational soft skills required in the 21st century workplace and society.

3.3. Request to University

Members of UIF Sophia have worked hard at implementing projects aimed at empowering students to become leaders of change by sparking their creative confidence and building a culture of collaboration. Their Design Thinking workshops, events, and other initiatives have succeeded in gathering the interest of a wide range of stakeholders, including students, faculty members,

administrative staff, external organizations, and I&E platforms in Japan. UIF Sophia Fellows will continue to work on a wide range of projects to meet the needs of the university community and contribute to Japanese society in positive ways. However, in order to be able to focus on these initiatives moving forward, UIF Sophia is in need of sustained funding and support from the university. By alleviating the financial burden on students, this will open up the doors for a greater number of students to participate in the UIF program, to learn Design Thinking, and to actively commit to their projects throughout their time at Sophia.

III. Concluding Remarks

There are a variety of ways in which sustainability is addressed in universities. It is important for students to create their own learning and ensure well-being through their experiences, as sustainability is defined by Moore (2005) as a concept that permeates the spheres of social justice along with ecological integrity, considering the well-being of all living systems on the planet. Even though students' learning is developed by their own initiatives, contextualized and situated learning as incidental learning at that time and place is also important. The deeper dimension of education for sustainability/sustainable development (ESD) requires two aspects: constructivism, which generates meaning for the learners themselves, and subjectivity, in which learners learn through participation (Maruyama 2022). Vallabh (2018) points out the difficulty in finding the balance between educating young people and enabling them to challenge and shape the movements because it is neither straightforward nor simple. However, many groups around the world have begun to develop transformative and transgressive approaches to ESD work with youth (p.168).

Sophia University is a global university that emphasizes sustainability, but there is much room for improvement in the quality of education for sustainability. Beyond traditional and modern university education, dialogue-oriented seminars with innovative concepts between disciplines and stakeholders can be emphasized more.[9] Furthermore, in an age where global and virtual networks are available to enable the pursuit of sustainability, we can envision a future where learning through direct dialogue with university students from around the world is an active part of the educational program.

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[9] The inter-disciplinary program "Sophia Program for Sustainable Futures (SPSF)" is already in operation but is still in the developmental stage.

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