

# SWU Sustainable Development Goals Report 2019



By Srinakharinwirot University



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# INTRODUCTION





#### ABOUT SRINAKHARINWIROT UNIVERSITY

Srinakharinwirot University was the first higher education institution in Thailand to focus solely on teacher training. It began as the Higher Teacher Training School at Prasarnmit. In 1953, it became the College of Education, having the authority to grant a bachelor's degree in education in the subject majors taught in Thai primary and secondary schools. Subsequently, programs at both the bachelor's and master's degrees were developed. In 1964, branch campuses were established for the regions of the country, which eventually split off into separate universities, although many still regard Srinakharinwirot as their mother university.

The university has 16 faculties, four colleges, one graduate school, two research institutes, seven centers and four demonstration schools. There are

two campuses, one at Prasarnmit, and the other at Ongkharak in the Ongkharak District, Nakhon Nayok Province.

The newer health science faculties, plus the faculty of engineering, are in rural Ongkharak. The Princess Maha Chakri Sirindhorn Medical Center was established, to provide medical students with the modern means for research

and training. It also provides medical care for students, staffs and the general public.

**Philosophy**: Education is growth.

#### Vision

Srinakharinwirot University is a leading institution for learning and research based on education, virtue and social service aiming to create innovation to global level.

#### Missions

- 1. To generate and develop individuals with high quality for learning and integrity through learning processes and learning society
- 2. To create high quality research and innovation that are sustainably useful for the society both at national and international levels
- 3. To provide academic service of high quality, awareness and social responsibility
- 4. To study, analyze and preserve art and culture
- 5. To develop and administrative system of high quality and good governance



#### SWU Sustainable Development Goals

Srinakharinwirot University has realized the importance of helping society and taking social responsibility seriously. The actions of enhancing knowledge, presenting opportunities, promoting education and transferring technology to the local areas have been taken to align with the concept "One Province, One University". Embracing the "Philosophy of Sufficiency Economy" by His Majesty King Bhumibol Adulyadej and putting into practical actions, the university therefore plays an important role in both social and rural development which is an integration of working with communities and regions to promote sustainable community development. Furthermore, all of these help to reduce social inequality, support and strengthen the relationship with the university and society, inspiring knowledge exchange, promoting network participation between domestic universities and foreign universities.

In 2019, Srinakharinwirot University has promoted and supported faculty members to participate more by making them understand the goal of sustainable development and creating a system "SWU supports the Sustainable Development Goals" to gather and report operational data that is consistent with the UN goals of all 17 SDGs. In the future, Srinakharinwirot University aims to push the operation to be more aligned with the goals and indicators of the UN and create cooperation both domestically and internationally to set goals and indicators together.





# **SDG 1 NO POVERTY**

End poverty in all its forms everywhere







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# **SDG 1 NO POVERTY**

End poverty in all its forms everywhere



#### **Projects List**



**Development of Natural Products to Support Community Enterprises** 





#### **Development of Natural Products to Support Community Enterprises**





This project aims to increase the quality of cosmetic products in Nakhonnayok by enhancing the efficacy of the cosmetic products and reduce the toxicity and irritation of the products. One of the activities supporting the objective of this project is to test if the cosmetic products sold in Nakhonnayok has been contaminated with microbes or not. We use scientific method which is approved by Thai FDA to test the contamination of microbes listed by the Thai FDA. These microbes are Aerobic plate count, Staphylococcus aureus, Escherichia coli, Pseudomonas aeruginosa, Candida albicans, and Yeast and Mold. The test has been performed by a professor and students in the Faculty of Pharmacy, Srinakharinwirot university. The test was run for three samples for each product. There are more than 35 products tested from our project in 7 years of project. The results show that approximately 20% of all tested products have been contaminated by microbes, especially fungus and mold. The manufacturers of products that have microbial contamination were called and asked to come to discuss with our consulting team. The consulting team led by another professor who is specialized in product development at the Faculty of Pharmacy told them the results, the meaning of the results, and the significance of sterility of products-how contaminated products can be very dangerous. The consultant explained and gave the manufactures the way to get rid of the microbes and the way to prevent the products from microbial contamination. We found that the factor that mostly causes contamination is contaminated water used to prepare cosmetic products. The second most common cause of the cosmetic contamination is contaminated natural extract added into the cosmetic products. The third cause is the non-use of antimicrobial as a preservative of the cosmetics. From these findings, we transfer this knowledge to the manufacturers and educate them how to avoid contamination. We also visit their



production sites to observe how to manufacture products to make sure that the equipment and place are conformed with cosmetic manufacturing standard.

In addition to microbial contamination, we have tested the irritation and hypersensitivity caused by cosmetic products in Nakhonnayok. Each year we collected 1 product to test with 30 human volunteers to see that cosmetic product irritate or induce hypersensitivity reaction to human skin. This test was approved by ethics committee of Srinakharinwirot University. This activity is aimed to ensure safety of products sold in the market of Nakhonnayok. The results show that all products tested pass. There are no products causing irritation and hypersensitivity to human skin, which means that they are safe to use.

Another activity that we continually do for all 7 years of the project is to educate cosmetic manufacturers in Nakhonnayok. We organized two lectures plus workshop two times a year to educate cosmetic manufacturers and people who are interested in producing cosmetics for sale. The participants of this activity are shown how to formulate high quality products, how to control the quality of products, how to design packaging of products, how to register products, and how to conform to cosmetic Good Manufacturing Practice (GMP). The speaker are both faculties in the Faculty of Pharmacy, Srinakharinwirot University or are invited speakers from other organizations. The participants were asked to evaluate satisfaction and useful of this activity. The results reveal that more than 95% of participants satisfy with this activity, which they mentioned that they gain more knowledge and were fun. More than 85% said that contents in the lectures and workshop can be used in their real life.

Another activity we performed in this project is to formulate new cosmetic products for people in Nakhonnayok and teach them how to prepare it in large scale manufacturing, as requested. There have been more than 30 products that professors and students of the Faculty of Pharmacy, Srinakharinwirot University formulated so far and many of them were registered and sold to the market, both national and international market. The products are tested for physical stability to ensure that they will be expired within the expiry dates before delivery to the manufacturers.

Anytime cosmetic manufacturers have problems, they have channels to contact a consultant of the project 24/7 by line application, phone call, and meeting in person. All these activities are free of charge. They are supported by Srinakharinwirot University.



#### **%** Result

The government provided a budget of 600,000 baht for implementing this project. Accordingly, knowledge about health product development and production standards were transferred to SME manufacturers and their competitive ability has been improved.

... Organized by Faculty of Pharmacy...



# **SDG 2 ZERO HUNGER**

End hunger, achieve food security and improved nutrition and promote sustainable agriculture







# **SDG 2 ZERO HUNGER**

End hunger, achieve food security and improved nutrition and promote sustainable agriculture



#### Projects List



Thai-Phaun Development Community Museum Project At Nongseang Subdistrict, Pakphli District, Nakhonnayok Province



# Thai-Phaun Development Community Museum Project At Nongseang Subdistrict, Pakphli District, Nakhonnayok Province





This project have 3 phases as following:

Phase 1: The committee processing by studying the problems and guidelines for promoting the learning of agricultural wisdom of the community in accordance with Thai Phuan way with the community.

Phase 2: The committee collected information on agricultural wisdom with the community by holding a group discussion to find a consensus on the agricultural learning center model and the exhibition for learning agricultural wisdom according to the Thai-Phuan way which are released to the needs of the community.

Phase 3: Renovate the area and install learning promotion exhibition at Thai Phuan Community Rice Mill Nakhon Nayok Province to be ready to produce publications to disseminate knowledge and agricultural wisdom of Thai-Phuan people at Nakhonnayok Province by the permanent secretary and the president of Nongsaeng Subdistrict Administrative Organisation that is honored as the president to open a community agricultural learning center.



Proportion of agricultural area in organic farm Has increased.

...Organized by Institute of Culture and Arts...



# SDG 3 GOOD HEALTH AND WELL-BEING

Ensure healthy lives and promote well-being for all at all ages







## **SDG 3 GOOD HEALTH AND WELL-BEING**

Ensure healthy lives and promote well-being for all at all ages



#### **Projects List**



Development Of Long-Term Care For The Elderly By The Involvement Of The Community, District, Bang Na District, Nakhon Nayok.



Health Care Quality Improvement Project And Stimulating Early Childhood Development By Using The Family As The Center Of Parents And Mentors



Development Of Thailand Hearing Healthcare Services System On The World Hearing Day Thailand Event.



The Tobacco Consumption Control Project: Medical Professional Network.



The Mobile Medical Unit Project.



Cost-Effectiveness Analysis Of A Community Health Promotion And Nutrition Program For An Aging Society.



Prototype Community Network In Geriatric Care.



The Dental Public Health Day.



The Royal Mobile Dental Service Project.





Integrated Community Health-Based In Field Training Project.



Botanical Garden Of The Faculty Of Pharmacy, Srinakharinwirot University.



Pharmacy Volunteer Academy Camp.



Elderly Homecare By 'Mor-Jew' Youth Volunteers Project.



Her Royal Highness Princess Maha Chakri Sirindhorn Medical Team Project.



Dengue And Zika Fever Awareness And Mosquito-Borne Disease Prevention In The Community.



Tuberculosis Control For The Residents Lived At Home For Person And Children With Disabilities In Nonthaburi.



Community Clinic For Elderly.



Youth Health Volunteers 'Mor-Jew' In School And Community.



# Development of Long-Term Care For The Elderly By The Involvement Of The Community, District, Bang Na District, Nakhon Nayok





Designing, integrating teaching with academic syllabus in NID 206: Health Promotion. Student nurse Year 2 co-operation with organizations in the area and learn the real situation.

- 1. Create the involvement of authorities in the area of primary health care units. Local governments And vocal civil society Brainstorm on the problems, needs and potential to contribute to the community's health, reduce the complications of chronic diseases of the elderly.
- 2. Development of village health volunteer leaders. Elders and leaders in health promotion and chronic food. The right exercises for the elderly, such as rubber batons for stretching, massage relaxes muscles and the brain.
- 3. Care for the elderly led by village health volunteers, vocal seniors and students nurse together to track the health of the elderly at home.

#### **%** Result

The proportion of 115 elderly participating in the project had knowledge in promoting better self-health. From the elderly in the community totaling 726 people

...Organized by Faculty of Nursing...



# Health Care Quality Improvement Project And Stimulating Early Childhood Development By Using The Family As The Center Of Parents And Mentors





For implementation of the project to developed quality of the toddler children in health care by the family center concepts and mentors since 2013 – 2016 of Faculty of nursing, Srinakharinwirot university. We founded that the children (3-5 years) not only have problems of reading and using language problems but also physical development, which consist with the World Health Organization (WHO) reported that children in the last 3 years have delay development problem more that 30% and almost of them have a problem in language development at 20%, fine muscle tone and strength development, social development, and gross muscle tone and strength development as 9, 8, and 7 percent, respectively. In addition, the delay development of children, especially language is found that a relationship with the cognitive function delay and excusive function (EF)

The focus of this project is to develop and promote of the language, social and physical with the good health as nutrition and health concepts. Those are the important factor of quality of life of children. Therefore, the family is an important part to be aware and interest and has action with mentor or school teachers to provide advice and care the preschool in with equally of gender. The operation of the project work in the center of the Child Development Center of Ongkharak Subdistrict, Ban Na Kindergarten (Chang Temple) Child Development Center Ban Na Kindergarten (Wat Chang), Ban Na Subdistrict, Municipality Child Development Center, Wat Iam Prasit School, Muang District, Child Development Center, Na Hin Lat Subdistrict, Pak Phli District, Child Development Center, Ban Khok Sawang School, Pak Phli District, Child Development Center, Ban Tha Maprang District, Pak Phli District, Nakhon Nayok Province.



## **Ø** Result

320 of participants, Parent and Teacher, are trained from our program for stimulated the children development with playing and learned how to evaluated the development their child.

...Organized by Faculty of Nursing...



# Development Of Thailand Hearing Healthcare Services System On The World Hearing Day Thailand Event









HRH MAHA CHACHI SIRINDHRON HOSPITAL Medical faculty Srinakharinwirot University Thailand is a lead team of Thai Healthcare who used multidiscipline joined with Obstetric, Pediatrics department, Audiology, Speech Rehabilitation segment and Department of Medical Services Thailand. Policy of The Royal College of Otolaryngologists-Head and Neck Surgeons of Thailand (Royal college of ORL) are hearing for life, Universal hearing screening in newborn, long term hearing loss management in aging group, development hearing rehabilitation system and pushing this policy for hearing healthcare services system in Thailand. HRH MAHA CHACRI SIRINDRON Medical center with The Royal college of ORL, Medical department, Rural Ear Nose and Throat Foundation, institutes from government, private hospitals and World Health Organization have performed "The World Hearing Day Event". This event was performed on 3rd March, 2019, 08.00-16.00 pm at Lumpini Public Garden, Pathumwan Bangkok, underwent campaigned "Check your hearing" via various media platforms such as on Television, Radio, Line, Facebook, Google etc. These events we provided knowledge via exhibition, discussion by specialist, questions-answers and Ear Nose Throat examination by Otolaryngologists and provided hearing screening, audiogram for people, Free of charge.



# **®** Result

- 1. number of participants = 450 cases
- 2. number of hearing screening patients = 305 cases

...Organized by Faculty of Medicine...



#### The Tobacco Consumption Control Project: Medical Pr ofessional Network







#### Operation plan 1: Academic activities

- 1. Workshop: Tobacco cessation
- 2. Workshop: Smoking prevention in patients with chronic diseases.
- 3. Conference on tobacco control
- 4. Award winner in HA National Forum
- 5. Innovation: Mobile application for tobacco cessation
- 6. Training course : Tobacco Cessation Instructor for medical professionals, nurses, and pharmacists

#### Operation plan 2: Network building activities

- 1. National level: A member of National Alliance for tobacco-free Thailand.
- 2. International level : visitors from Myanmar member of parliament and Sri Lanka Ministry of Public Health personnel.

#### **%** Result

- 1. Number of mortality attributed to smoking related diseases = 75,000 cases per year
- 2. Prevalence of current tobacco use (aged 15 years and older) = 10.7%

...Organized by Faculty of Medicine...



#### The Mobile Medical Unit Project





The mobile medical unit project was first implemented in 2002. The aims of this project were to provide medical treatment, health care education and dental services for people who live in the rural areas of Thailand.

#### **Ø**

#### Result

- 1. number of patients participated in the project (total) = 1,551 cases
  - 1.1 number of patients (children 0-18 years old) = 1,266 cases
  - 1.2 number of patients (adult 18 years and older) = 285 cases

...Organized by Faculty of Medicine...

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# Cost-Effectiveness Analysis Of A Community Health Promotion And Nutrition Program For An Aging Society







คณะเศรษฐศาสตร์ ได้มีความร่วมมือระหว่างคณะพลศึกษา คณะพยาบาลศาสตร์ มหาวิทยาลัยศรีนครินทรวิโรฒ และ โรงพยาบาลส่งเสริม สุขภาพตำบลบ้านพรหมเพชร โดยประชากรที่ใช้ในการวิเคราะห์ต้นทุน-ประสิทธิผลของการส่งเสริมสุขภาพและโภชนาการเพื่อเตรียมความพร้อมในการ เข้าสู่สังคมผู้สูงอายุในชุมชน และผลจากการสำรวจในพื้นที่ ตำบลโคกกรวด อำเภอปากพลี จังหวัดนครนายก พบว่า จำนวนประชากรที่หักอาศัยอยู่จริง ทุกช่วงอายุ มีจำนวน 1,961 คน ประชากรที่มีอายุ 40 ปีขึ้นไป มีจำนวน 1,188 คน คิดเป็นสัดส่วนร้อยละ 60.58 ของประชากรทั้งหมดในพื้นที่ ดังนั้น กลุ่ม 40 ปีขึ้นไปที่จึงนับว่า เป็นกลุ่มตัวแทนในชุมชนได้เป็นอย่างดี การวิจัยในครั้งนี้ได้คัดเลือกตัวแทนทั้งสิ้น จำนวน 90 คน คิดเป็นสัดส่วน ร้อยละ 7.5 ของประชากรที่มีอายุ 40 ปีขึ้นไป โดยแบ่งกลุ่มตัวอย่างออกเป็น 3 กลุ่ม คือ กลุ่มส่งเสริมสุขภาพฯ 30 คน กลุ่มโภชนาการ 30 คน และ กลุ่มควบคุม 30 คน ผ่านโปรแกรม "ส่งเสริมสุขภาพโดยการออกกำลังกายเหมาะสมวัย" และโปรแกรม "โภชนาการดีสมวัยห่างไกลโรค" โดยมีการจัด กิจกรรมการอบรมเชิงปฏิบัติการให้กับกลุ่มตดลองในแต่ละกลุ่ม ระยะเวลา 12 สัปดาห์ๆ ละ 1 ครั้ง โดยสัปดาห์ที่ 1 และสัปดาห์ที่ 12 กลุ่มตัวอย่างจะ ได้รับการประเมินภาวะสุขภาพ โดยการชั่งน้ำหนัก วัดรอบเอว วัดค่าดัชนี มวลกาย (BMI) และวัดความดันโลหิต และแจ้งกลุ่มตัวอย่างให้มาเจาะเลือดตามนัด ก่อนและหลังเข้าร่วม เพื่อส่งตรวจทางห้องปฏิบัติการ 5 รายการ ได้แก่ เจาะเลือดเพื่อหาคำระดับน้ำตาลในเลือด คอเลสเตอรอลรวม ไตรกลีเซอร์ไรด์ ไขมันดี และไขมันเลว ผู้วิจัยนำผลการเปลี่ยนแปลงทางภาวะสุขภาพ มาหาค่าความแตกต่าง ก่อนและหลังการเข้าร่วมโครงการของกลุ่มทอลองแต่ละกลุ่ม โดยเปรียบเทียบค่าความแตกต่างในกลุ่มทดลองและกลุ่มควบคุม ทั้งนี้ เพื่อศึกษาหาแนวทางในการส่งเสริมสุขภาพฯและโภชนาการที่เหมาะสมกับคนในชุมชน

#### **Result**

The study "Cost-effectiveness Analysis of Health and Nutrition promotion for Aging society Preparedness in Community" aims to investigate health and nutrition status of community members in a target area. Next, cost-effectiveness analysis for each method of health and nutrition promotion are experimentally emphasized. Finally, the recommending practices for promoting health and nutrition suitable for the community members are proposed. The total of 78 representative samples consist of both elderly group and a group approaching aging society in Khok Kruat sub-districts, Pak Phli districts, Nakhon Nayok province. The subjects in the research are divided into 3 groups: 1) health promotion



using aerobic exercise 2) food and nutrition promotion and 3) the controlled group. The experimental participants in 1) and 2) attend 12 activities, while before-and-after health status are evaluated and compared against the controlled group. The effectiveness in health and nutrition promotion is calculated from weight, waist circumference, Body Mass Index (BMI), and laboratory examination results. This study also presents numerical results in percentage, mean, standard deviation, and compares two groups of dependent and independent variables as well as cost-effectiveness.

The results indicate that Obesity is the top health problem in the community, followed by Hypertension, Diabetes Mellitus (DM), Osteoarthritis, Dyslipidemia, Dementia, and Bronchitis. Most elderly persons in the community have very good level of knowledge regarding food consumption behavior. At the end of project, it indicate that health indicators resulted from the health promotion significantly reduced weight, waist circumference, BMI, high blood pressure, and cholesterol, while increase High Density Lipoprotein (HDL). Furthermore, health indicators resulted from food and nutrition promotion also provided the similar findings as in the case of health promotion, excepted for an increase of HDL. The cost-effectiveness in health promotion and nutrition promotion per unit of health indicators are 48,960.50 bath, and 63,711.02 bath, respectively. Meanwhile, the cost-effectiveness of the participants in health promotion and nutrition promotion are 24,480.25 bath, and 24,504.31 bath, respectively. The policy implication from the study suggests that it is more cost-effective to conduct health promotion using physical exercise. Nevertheless, it should be complementary to implement both exercise and nutrition promotion since they would ultimately reinforce each other and have a significantly positive effect on health and body outcomes.

...Organized by Faculty of Economics...



#### Prototype Community Network In Geriatric Care





"Prototype community network in geriatric care" was a community service project hosted by the Faculty of Physical Therapy, Srinakharinwirot University (SWU). This project aimed to provide the knowledge regarding geriatric care for elderly people, family members, and community volunteers in order to facilitate the collaboration on geriatric care among these target populations in the form of community network where the educational institute is the consulting partner.

Two main activities were conducted at several locations in the suburban community, including Faculty of Physical Therapy SWU, Ampasiriwong temple, KlongYai school, Wat Chiew-Osod school, Wat Ampasiriwong school, Klongyai subdistric administration organization at Nakhon nayok province, and Banmaithia-pattana temple at Sa kaeo province.

Activity 1 was carried out to create the training program in geriatric care, including making biofermented water from household food waste, nutrition and exercise for elderly, transfer and ambulation training for elderly, universal design for elderly that was appropriate for those in the community network, Nakhon nayok. The duration of this activity was from 17 November 2018 to 30 June 2019. Activity 2 involved the physical therapy and health promotion service of the target population, including elderly persons, family members and community volunteers, Sa Kaeo on 9-10 March 2019.



The quality of life and physical performance are indicators which related to the rate of illness or improved health of elderly in the community. Recently, rate of illness and dying of elderly has been no increased (0% changed). In addition, the good nutrition and decreased of amount of waste in the community are an indicator of a better quality of life.



#### The Dental Public Health Day





This project aims to provide local people with necessary dental treatments without any cost, take place on October 21st of every year to commemorate the previous king's mother who initiated the Dental Public Health day

#### Result

- In 20 October 2017 : 731 people

- In 19 October 2018 : 754 people

- In 21 October 2019 : 854 people

...Organized by Faculty of Dentistry...



#### The Royal Mobile Dental Service Project



This mobile dental service project has served people in underprivileged areas, providing them with necessary dental service has been organized in many provinces in thailand and neighboring country such as Lao.



#### Result

- In 2018 : 9,075 people

- In 2019 : 10,365 people

...Organized by Faculty of Dentistry...



# Integrated Community Health-Based In Field Training Project





Ongoing developments in Thai societies are dramatically changing the way health care is delivered. In essence, health care delivery has to deal with fragmentation due to these developments. Current problems show that the pattern of illness and death in Thai people has changed from communicable diseases to non-communicable diseases, which are partly caused by inappropriate health behaviors. In addition, from the Thai health survey at Ongkharak, Nachon-Nayok province by physical examination of Ongkharak health center in 2019 found that the Thai population is unaware about chronic diseases or most people who know that they are chronically, but they are unable to control symptoms and take care of yourself correctly. In which the condition often leads to disability in the end, resulting in a dependency on life and want to continue to be cared for by family members or society. Therefore, the Department of Public Health, Faculty of Physical Education, Srinakharinwirot University organized this project for students to learn public health practice in the community emphasized in knowledge and understanding In the practice of public health in the community, able to apply theoretical knowledge to practice in finding health problems of community, analyze problems plan to solve problems, including implementation of a project to solve community health problems. the results from the project will give students professional experience, more love and faith in their profession and is ready to be good public health for the people to have good health Which will bring quality populations further.

This academic service project was organized to solve public health problems in the community under the supervision of the teachers responsible from the Department of Public Health, Faculty of Physical Education, Srinakharinwirot University. This project had 11 activities on 26 April - 21 May 2019 as follows:

- 1. Activity project "Incinerate waste in the correct way to bring good things to the community". Participants were 10 people in the community.
- 2. Activity project "Filter a bit Before thinking of using water ". Participants were 13 people in the community.
- 3. Activity project "Waste Management in the Community". Participants were 10 people in the community.
- 4. Activity project "Proper use and disposal of pesticides". Participants were 19 people in the community.



- 5. Activity project "Stretching 9 postures leads to good health". Participants were 17 people in the community.
- 6. Activity project "Manage waste properly and happily". Participants were 10 students in the community.
- 7. Activity project "Educating waste separation Making compost buckets from food waste in a basket with buried soil ". Participants were 11 people in the community.
- 8. Activity project "Join Together Thai Village concerned about health on hazardous waste management and proper management". Participants were 12 people in the community.
- 9. Activity project "Join Together Thai Village concerned for health regarding exercise that is suitable for age". Participants were 10 people in the community.
- 10. Activity project "Know about hazardous waste, reduce danger, reduce the burden". Participants were 20 people in the community.
- 11. Activity project "Life is safe, far away pesticide in Ban Pak Khlong Jek community". Participants are 24 people in the community.

#### **(%)** Result

- (1) the 156 people participated in the total of 11 activities. All of them found that the people participating in the project have the knowledge, a good attitude, and good health increases by 100%.
- (2) the evaluation by using the satisfaction questionnaire of 156 people who participated in the activities project found that overall satisfaction was at the highest level with an average of 4.49.
- (3) the evaluation using the satisfaction questionnaire of 134 students who participated in the project found that overall satisfaction was at the highest level with an average of 4.58.
- (4) the attitude evaluation of students towards public health operations found that the highest level with an average of 4.56.
- (5) the percent of students who can apply the theoretical knowledge to public health practice in the community equal to 100 and the percentage of students who have lesson learn about public health practice in communities equal to 100.

...Organized by Faculty of Physical Education...



#### Botanical Garden of the Faculty of Pharmacy, Srinakharinwirot University





UNIVERSAL ACCESS TO AFFORDABLE VACCINES AND MEDICINES

The botanical garden of Faculty of Pharmacy, Srinakharinwirot University is set in 3.7 hectares of an agricultural land reform area at Banna district in Nakonnayok province. This land was originally considered to be a waste area because the soil was highly acidic and several plant species consequently did not grow well. Collaboration with two organizations, Agricultural Land Reform Office and Land Development Office, for more than ten years, Faculty of Pharmacy has eventually improved the soil condition at the botanical garden by liming technique and "green manure strategy". The land is shaped to form slope and curve in order to facilitate water irrigation and drainage. Bamboo trees and Dipterocarpus trees, have been grown around the botanical garden as wind breaking. Various kinds of perennial trees have been initially grown in order to provide shade and host of climbing vines. Then selective shrubs and herbs have successfully been cultivated (figure 1).

Faculty of Pharmacy also has collaboration with traditional doctors and local people. They not only provide various kinds of medicinal plants but also transfer their local wisdom related to traditional use of these plants. The botanical garden now collects approximately 400 medicinal plant species and still move forward to collect more medicinal plants. The botanical garden also serves community for recreation area and workshop activities related to how to use herbs and herbal products safely. In addition, the botanical garden facebook has been established to communicate information and activities to community for nearly five years.



#### **%** Result

The role of botanical garden is to maintain living plant collections for the purposes of scientific research and education. It is also a center for studing of herbal medicines.

The botanical garden has arranged workshops to provided information of the medicinal plants that have been used in the community in terms of safety and efficacy. Herb processing such as drying, cutting and storing was also discussed to maintain herb quality.

The community has improved their health by using herbs in the community for their primary health care and they could safe their health budget. The community could also produce household products such as soap, dish detergent from the herbs.

...Organized by Faculty of Pharmacy...



#### Pharmacy Volunteer Academy Camp









This project were focus on health care of people around Tumbon Lumsompung, Saraburi province, where people were poor and low educated. Most of people around here are farmer. They raise cow for milk. The activities were visit people in Lumsompung and give advices to them. The advices were included safely storage of their medicine, how to use medicine correctly, and how to take care of themself and their family. We worked together as a team with the FDA government who are pharmacists in that area. After visiting, we wrote reports and presented to them. This will help them solve problems. Moreover, our students could work from the real situation, which was much different from what they have learn in a classroom. This provided good experiences and built good attitude for them about Pharmacist. Since we stayed at Lumsompung school during the activities, we did a lot of volunteer jobs for example organize books in a library and also the medicine in the infirmary. We also created the events which we invited people around this area to see the exhibitions about medicines.

#### **Result**

The Pharmacist Volunteer Service provided knowledge to the public through the home visit project which incorporated with community leaders. We have solved the problem of improper drug use among patients in each house. We also recommend healthcare knowledge to them in order not to spread the disease to others or to prevent additional diseases as well. We also educated people by organizing exhibitions at school. There were brochures and workshops for people in order to gain good experiences.



#### Elderly Homecare By 'Mor-Jew' Youth Volunteers Project





Village Health Volunteers (VHV) were the hallmark of primary healthcare in Thailand during the past four decades. Panyananthaphikkhu Chonprathan Medical Center (PCMC) initiates youth health volunteers called 'Mor-Jew' which means little doctors. This project trains the youth volunteers (age 9–14 years old) from the community to practice basic screening, triage procedure such as blood pressure and blood glucose monitoring, and educating them about common disease prevention as well as basic hygiene to take care of elderly in their family. 'Mor-Jew' has fundamental skills to help VHV who have a huge responsibility in the area. Working together, VHV and 'Mor-Jew' can serve as a bridge to the formal health system and actively contribute a preventive healthcare to people in their communities.

#### (%) Result

'Mor-Jew' project provides basic healthcare training to 400 selected youth volunteers in 2 provinces: Sa Kaeo, and Chiang Mai.

...Organized by Panyananthaphikkhu Chonprathan Medical Center...



#### Her Royal Highness Princess Maha Chakri Sirindhorn Medical Team Project





Her Royal Highness Princess Maha Chakri Sirindhorn Medical Team Project has volunteered personnel from Panyananthaphikkhu Chonprathan Medical Center (PCMC) which provides free healthcare support and treatment for unprivileged people. The operation of the project works in the rural areas across country all year round. This project ideally makes the residents able to conveniently access to primary care service such as, health checkup, medical treatment, and dental care service. These poor people can save the waiting time and healthcare expense in-center hospitals which mostly locate in town. Furthermore, they were given basic knowledge about self-health care. Through these activities provided, the project also enables the participants to achieve universal health coverage and access to quality essential health care services and medicine for all.

#### **Result**

In 2019, 1,500 participants in 5 rural areas in the North and Northeastern part of Thailand got basic health care services and medicine.

...Organized by Panyananthaphikkhu Chonprathan Medical Center...



#### Dengue And Zika Fever Awareness And Mosquito-Borne Disease Prevention In The Community





Infections caused by arboviruses such as dengue virus, and Zika virus frequently occur in tropical countries. These viruses are transmitted by mosquito. Panyananthaphikkhu Chonprathan Medical Center (PCMC) has organized the campaign for disease awareness and prevention of mosquito-borne disease by protecting children and population from mosquito bites.

Engaging volunteers in the community through training, communication activities and messaging in schools have been created as well as designing and conducting environmental control programs. To encourage environmental cleanup in schools and surrounding areas in Moo 1 of Bang Talat area in Pak Kret district, Nonthaburi, containers that hold water where mosquitoes lay eggs are all removed from playgrounds and sports fields.

#### Result

The rate of dengue hemorrhagic fever is 55.97/100,000 populations in Moo 1 Bang Talat sub-district (projected area), compare to 143/100,000 populations in Pak Kret district (non-projected area) located in Nonthaburi province.

...Organized by Panyananthaphikkhu Chonprathan Medical Center...



### Tuberculosis Control For The Residents Lived At Home For Person And Children With Disabilities In Nonthaburi





Hard-to-reach populations often have specific risky factors which render them more exposure and vulnerability to an infection with Mycobacterium tuberculosis which may later actively develop tuberculosis disease (TB). With additional cooperation of the Panyananthaphikkhu Chonprathan Medical Center (PCMC) medical personnel, staff members from 15 homes for person and children with disabilities in Pak Kret, Nonthaburi jointly have activities regarding rapid identification of the source of transmission and contact investigation in settings around the primary case which are essential to stop disease transmission.

Working together, standard procedure in case-detection was established and Directly Observed Treatment (DOT) with anti-tuberculosis drug was introduced. Expecting better level of treatment, compliance has been established for the control of TB incidents affecting these vulnerable people.

### **Result**

PCMC provides onsite pulmonary tuberculosis screening for 1,712 residents living in these homes. Unfortunately, 147 people have documented abnormal chest x-ray and later proceeded to further investigation in the hospital.

...Organized by Panyananthaphikkhu Chonprathan Medical Center...



#### **Community Clinic For Elderly**





Thailand is encountering some significant risks caused by an increase of ageing population. Dismally, caregivers themselves are getting older. Family members also suffer high stress, especially when they have to look after bed-bound parents. The government sustenance via Villager Health Volunteers (VHV) has supported communities to look after ageing members. In rural areas, members of tight-knit communities often co-operate, but in urban society they face a shortage of manpower especially among those who are able to take care of these elderly. Moreover, ageing people have limited financial resources to access health services. Panyananthaphikkhu Chonprathan Medical Center (PCMC) provides onsite community clinic for elderly in Bang Talat sub-district located in Pak Kret District, Nonthaburi province.

This project facilitates senior citizens getting the access to a quality essential healthcare services: treatment, health promotion, disease prevention, and rehabilitation at one-stop service.



The good controlled blood pressure among hypertensive elderly was at 71% and 23% of diabetics had lower hemoglobin A1C (good glycemic control).

...Organized by Panyananthaphikkhu Chonprathan Medical Center...



### Youth Health Volunteers 'Mor-Jew' In School And Community





Thailand has approached ageing society. Families and communities are seriously confronting limited resources to look after ageing parents and other relatives as Thailand becomes a full-fledged ageing society over the years. Young family member should be responsible for these major challenging problems. Panyananthaphikkhu Chonprathan Medical Center (PCMC) initiates youth health volunteers called 'Mor-Jew' (little doctors) project. This project trains the youth volunteers (age 9–14 years old) from the community to practice basic screening, triage procedure such as blood pressure and blood glucose monitoring, and educating them about common disease prevention as well as basic hygiene to take care of elderly in their family. Also, these health volunteers can teach adult in the community how to prevent mosquito-borne illnesses, such as dengue fever. This program can be served as a bridge to the formal health system (primary healthcare unit, health promoting hospitals and referral hospitals) and actively promotes the cooperation between people in their communities and schools through the youth



### Result

'Mor-Jew' project provides basic healthcare training to 100 selected youth volunteers in Nonthaburi.

...Organized by Panyananthaphikkhu Chonprathan Medical Center...



### **SDG 4 QUALITY EDUCATION**

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all







### **SDG 4 QUALITY EDUCATION**

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



### **Projects List**



Development Of Long-Term Care For The Elderly By The Involvement Of The Community, District, Bang Na District, Nakhon Nayok



Health Care Quality Improvement Project And Stimulating Early Childhood Development By Using The Family As The Center Of Parents And Mentors



โครงการรวมพลังสร้างสรรค์เด็กไทยส่งเสริมนิสัยรักการอ่าน: การสร้างความเข้มแข็งและความยังยืนของโรงเรียนเพื่อการรวมพลังสร้างสรรค์เด็กไทยส่งเสริมนิสัย รักการอ่านระยะที่ 2



Spreading Creativity, Sharing Happiness Through Children's Literature Project



The East Asian Languages Teaching Community Service



โครงการการพัฒนาหลักสูตรสถานศึกษาที่ส่งเสริมคุณลักษณะและทักษะการเรียนรู้ในศตวรรษที่ 21 ของเด็กและเขาวชนด้วยแนวทางการจัดการเรียนรู้ Stem+Stem2



โครงการบ้านนักคณิตศาสตร์



โครงการศิลปกรรมบำบัดเพื่อการพัฒนาศักยภาพมนุษย์



**Development Of Natural Products To Support Community Enterprises** 



Botanical Garden Of The Faculty Of Pharmacy, Srinakharinwirot University





The Development Of English Language Proficiency Among Locals Living Around Cross Border Economic Zones In Sakaeo Project





Integrated Farming By Sufficiency Economy Guidelines Project: Workshop For Biodiesel Production And Agriproduct Processing



Special Education And Care Pedagogical Training Program



### Development Of Long-Term Care For The Elderly By The Involvement Of The Community, District, Bang Na District, Nakhon Nayok





Designing, integrating teaching with academic syllabus in NID 206: Health Promotion. Student nurse Year 2 co-operation with organizations in the area and learn the real situation.

- 1. Create the involvement of authorities in the area of primary health care units. Local governments And vocal civil society Brainstorm on the problems, needs and potential to contribute to the community's health, reduce the complications of chronic diseases of the elderly.
- 2. Development of village health volunteer leaders. Elders and leaders in health promotion and chronic food. The right exercises for the elderly, such as rubber batons for stretching, massage relaxes muscles and the brain.
- 3. Care for the elderly led by village health volunteers , vocal seniors and students nurse together to track the health of the elderly at home.

### Result

All volunteers in the community who voluntarily join the program have equal rights to judge, regardless of gender and age

 $... Organized \ by \ Faculty \ of \ Nursing...$ 



### Health Care Quality Improvement Project And Stimulating Early Childhood Development By Using The Family As The Center Of Parents And Mentors





For implementation of the project to developed quality of the toddler children in health care by the family center concepts and mentors since 2013 – 2016 of Faculty of nursing, Srinakharinwirot university. We founded that the children (3-5 years) not only have problems of reading and using language problems but also physical development, which consist with the World Health Organization (WHO) reported that children in the last 3 years have delay development problem more that 30% and almost of them have a problem in language development at 20%, fine muscle tone and strength development, social development, and gross muscle tone and strength development as 9, 8, and 7 percent, respectively. In addition, the delay development of children, especially language is found that a relationship with the cognitive function delay and excusive function (EF)

The focus of this project is to develop and promote of the language, social and physical with the good health as nutrition and health concepts. Those are the important factor of quality of life of children. Therefore, the family is an important part to be aware and interest and has action with mentor or school teachers to provide advice and care the preschool in with equally of gender. The operation of the project work in the center of the Child Development Center of Ongkharak Subdistrict, Ban Na Kindergarten (Chang Temple) Child Development Center Ban Na Kindergarten (Wat Chang), Ban Na Subdistrict, Municipality Child Development Center, Wat Iam Prasit School, Muang District, Child Development Center, Na Hin Lat Subdistrict, Pak Phli District, Child Development Center, Ban Khok Sawang School, Pak Phli District, Child Development Center, Ban Tha Maprang District, Pak Phli District, Nakhon Nayok Province

### **%** Result

945 early Childhood Participants are assessed and evaluated development, nutritio status and health. All this subject are played and learned from our program to stimulated the delay development problem as reading, using language problem, social and emotional problem. After program, subject have improve the development by play and learn with their family and teacher.



### โครงการรวมพลังสร้างสรรค์เด็กไทยส่งเสริมนิสัยรักการอ่าน : การสร้างความเข้มแข็งและความยั่งยืนของโรงเรียนเพื่อการรวมพลัง สร้างสรรค์เด็กไทยส่งเสริมนิสัยรักการอ่านระยะที่ 2









The project has two important ideas in conducting activities:

- (1) The key to creating a reading culture must begin with reading that brings happiness and enjoyment to children, and then gradually elevates the enjoyment to the development of intelligence to lead to well-being in lifestyles in both Individualism and social level, and
- (2) Creating a reading culture for children requires cooperation and energy, including at the school level, classroom, family, community, administrators, teachers, parents, academics and student teachers as participants in organizing a process to promote appropriate reading habits. In context of the child With this in mind, the project has carried out four key activities to achieve its goals.

### **Result**

The results of the project have given the children participating in the project a chance to gain experience. "Reading to listen" through the use of a variety of "picture books" The number of listening is frequency and consistent. Effective reading is a hierarchical development, especially for early literacy in early childhood using reading-listening and learning. Age-appropriate picture books to provide children with a sufficient listening experience and vocabulary for primary and secondary reading. Neglecting reading, listen at this early stage and expedite the child to begin reading with spelling. While the child lacks sufficient listening skills, attention, vocabulary, and the ability to interpret stories. Makes the beginning of reading not fun. It's a difficult and slow process for kids. Affect the child's love of reading in the long term

The main target group of the project is the early childhood (2-6 years), which develop cognitive and intellectual learning. Children should be promoted in basic memory skills and cognitive skills



(concept formation), project activities aimed at giving children a reading experience through picture story books. It promotes both memory and thinking abilities. Through age-appropriate learning activities: listening to stories, talking with narrators (teachers, parents or adults reading to them), observing pictures in picture storybooks, as well as listening to adults' reading. Children's brains form a process of thinking and interpreting stories. As a result of the program, children have the opportunity to do activities like this on a regular basis, affecting learning development.

Reading is one of the most important tools in bringing a person to learn throughout their lives. If the habit of reading is not established at a young age, citizens will continue to lack essential learning skills. The project implementation has two important concepts in the implementation of activities: 1) To create a reading culture, it must start from reading that brings happiness and enjoyment to children, and then gradually enhances the enjoyment to develop intelligence to It leads to well being in the way of life at both the individual and the social level, and 2) the building of a reading culture for children requires cooperation and synergy at the family, school and community levels through the process of promoting age-appropriate reading habits. And the context of the child

...Organized by Faculty of Education...



### Spreading Creativity, Sharing Happiness Through Children's Literature Project





Through children's tales as the main apparatus, the undergraduate students from the Children's Literature program utilized their skills and resources from CL213 and CL312 courses to provide meaningful and inspiring experiences to a group of 28 kindergarten students between 4 and 5 years of age at Ban Khao Arng Keow school, Phetchaburi province from May 28 to May 29, 2019. A need survey of this target group was proceeded prior to the set activities. Based on the survey, various media types of the children's tales were prepared for the set activities. Many of the media were made from cloths to accelerate the children's micro muscle development. Such media were also deemed to activate the children's creativity, artistic abilities and communication skills. At the end of the set activities, all of the project's products and media were donated to the school.

### **Result**

Classified by sexes, the proportion of female to male children developed, in terms of their learning and psychosocial well-being, by the project's activities is about 6 : 4 (17 females to 11 males.)

Considering the facts that Thailand's governmental standard of admitting children of 6 years old for the primary school 1st grade and that all 28 children participating in the project's organized learning program are under 6 years old, the proportion of female to male children is about 6 : 4 (17 females to 11 males.)

...Organized by Faculty of Humanities...



#### The East Asian Languages Teaching Community Service







As Thailand is thriving in global competitive environment, the Thai citizens need to be equipped with third language skills. It is for them to be more versatile in dealing with the dynamic of interconnected world. Considering the Asian superpowers presently influencing Thailand's business sector, being competent in a major Asian language would be a significant advantage for one's professional life. Nowadays, most secondary schools offer Asian languages as elective courses in their curriculum. Unfortunately, many schools face the scarcity of learning resources both in terms of teaching staff members and of extracurricular activities.

Aiming to take part in improving the status of Asian language learning in Thai secondary schools with the mentioned deficiency, 98 undergraduate students from the three majors—Chinese, Japanese and Korean in Asian Languages Program participated in this project. The undergraduate students acted as instructors and facilitators in Asian language classes for 184 students of the three major secondary schools in Bangkok. These included Srisuriyothai Lady School, Santirat Witthayalai School, and Mathayom Wat Makutkasat School. During the 6 days of teaching and facilitating the classes in total, the target school students were provided extracurricular activities to practice the three Asian languages. It was hoped that the activities would help them improve their Asian language proficiencies in a certain standard level. For the efficiency of the teaching activities, each undergraduate student was to attend a one-day meeting which allowed him/her to gain a great deal of background information concerning the target students' learning situations, their difficulties and their various learning needs. Furthermore, they were given a chance to survey the target students' learning condition for themselves. Then, each undergraduate student was given time to prepare his/her lesson plan. The actual teaching activities consisted of two parts. The first part dealt with the 3 days of first-run teaching classes. The second part, which was in a week later, was the 3 days of teaching classes in which the teaching plans were improved from the first-run classes' learning results. The overall data concerning the program's effectiveness were both quantitatively and qualitatively analyzed in details. The concluding activities involved organizing the meeting for doing the project's summary report, and drawing potential lesson plans as a major informational input for the next relevant projects.



### **Result**

The participation rate of 184 formal students attending the the program's classes, classified by their sexes, is 112 (female) to 72 (male) or about 6 : 4.

The program's learning contents for all Thai students are of 3 dominant Asian languages (Chinese, Japanese and Korean) which are influencing Thailand's business sector and the regional economic environment. So, being competent in a major Asian language would be a significant advantage for the participants' future professional life.

...Organized by Faculty of Humanities...



### โครงการการพัฒนาหลักสูตรสถานศึกษาที่ส่งเสริมคุณลักษณะและทักษะการเรียนรู้ ในศตวรรษที่ 21 ของเด็กและเยาวชนด้วยแนวทางการจัดการเรียนรู้ Stem+Stem2



โครงการการพัฒนาหลักสูตรสถานศึกษาที่ส่งเสริมคุณลักษณะและทักษะการเรียนรู้ในศตวรรษที่ 21 ของเด็กและเยาวชนด้วยแนวทางการ จัดการเรียนรู้ STEM + STEM2 แบ่งออกเป็นจำนวน 2 กิจกรรม ดังนี้

- 1) กิจกรรมที่ 1 การพัฒนาหลักสูตรสถานศึกษาที่ส่งเสริมคุณลักษณะและทักษะการเรียนรู้ในศตวรรษที่ 21
  - 1.1 การอบรมเชิงปฏิบัติการเพื่อพัฒนาหลักสูตรสถานศึกษาฯ
  - 1.2 การติดตามผลการพัฒนาหลักสูตรสถานศึกษา ฯ
- 2) กิจกรรมที่ 2 กิจกรรมเสริมประสบการณ์การเรียนรู้สะเต็มศึกษาสำหรับเยาวชนในพื้นที่ห่างไกล

กิจกรรมการอบรมเชิงปฏิบัติการเพื่อพัฒนาหลักสูตรสถานศึกษาที่ส่งเสริมคุณลักษณะและทักษะการเรียนรู้ในศตวรรษที่ 21 วันที่ 7-11 เมษายน 2562 ณ โรงแรมสเตชั่นวัน อำเภออรัญประเทศ จังหวัดสระแก้ว

สำหรับกิจกรรมนี้เป็นความร่วมมือกันระหว่างคณาจารย์และนิสิตศูนย์วิทยาศาสตรศึกษา คณะวิทยาศาสตร์ สำนักงานเขตพื้นที่การศึกษา ประถมศึกษาสระแก้ว เขต 2 จังหวัดสระแก้ว และโรงเรียนในเขตพื้นที่การศึกษาประถมศึกษาสระแก้ว เขต 2 เพื่อจัดทำหลักสูตรสถานศึกษาที่ ส่งเสริมอัตลักษณ์ของจังหวัดสระแก้วพร้อมกับการพัฒนาทักษะการเรียนรู้ในศตวรรษที่ 21 ของผู้เรียน โดยใช้นวัตกรรมการพัฒนาหลักสูตรบูรณาการ สะเต็มกำลังสอง (STEM2) ที่นักเรียนจะได้เรียนรู้บูรณาการตัวชี้วัดของทั้ง 8 สาระวิชา ตามหลักสูตรแกนกลางการศึกษาขั้นพื้นฐาน พ.ศ. 2551 (ฉบับปรับปรุง พ.ศ. 2560) โดยมีผู้บริหารและครูที่สนใจเป็นโรงเรียนดันแบบเข้าร่วมพัฒนาหลักสูตรและใช้หลักสูตรจำนวน 7 โรง ได้แก่ โรงเรียน บ้านท่าเกวียน โรงเรียนบ้านโคกสามัคคี โรงเรียนอุนบาลศรีวัฒนาวิทยาลัย โรงเรียนบ้านวังรี โรงเรียนบ้านเนินสะอาด โรงเรียนบ้านหนองปรือ โรงเรียน บ้านโคคลาน ซึ่งได้กำหนดข้อตกลงร่วมกันระหว่างศูนย์วิทยาศาสตรศึกษา คณะวิทยาศาสตร์ และโรงเรียนในการพัฒนาและนำหลักสูตรไปใช้ต่อเนื่อง เป็นระยะเวลา 3 ปี กิจกรรมนี้ มีผู้เข้าร่วมโครงการทั้งสิ้น 74 คน ประกอบไปด้วย คณาจารย์เจ้าหน้าที่ และนิสิตระดับบัณฑิตศึกษา ศูนย์วิทยาศาสตรศึกษา คณะวิทยาศาสตร์ ผู้บริหารและบุคลากรทางการศึกษาจากเขตพื้นที่การศึกษา และจากโรงเรียนจำนวน 7 โรง รู้และให้เหมาะสมกับบริบทของทาง พื้นที่เพื่อที่จะนำไปใช้กับทางโรงเรียน โดยแบ่งเป็นจำนวน 2 ครั้ง

- ครั้งที่ 1 วันที่ 1-2 มิถุนายน 2562 ณ สำนักงานเขตพื้นที่การศึกษาประถมศึกษาสระแก้วเขต 2 มีผู้เข้าร่วมจำนวน 47 คน
- ครั้งที่ 2 วันที่ 14-15 มิถุนายน 2562 ณ สำนักงานเขตพื้นที่การศึกษาประถมศึกษาสระแก้วเขต 2 มีผู้เข้าร่วมจำนวน 26



จากผลการดำเนินการในกิจกรรมการอบรมเชิงปฏิบัติการเพื่อพัฒนาหลักสูตรสถานศึกษาที่ส่งเสริมคุณลักษณและทักษะการเรียนรู้ในศตวรรษ ที่ 21 ทำให้ได้หลักสูตรสถานศึกษาที่ส่งเสริมอัตลักษณ์ของท้องถิ่นและพัฒนาทักษะในศตวรรษที่ 21 ของผู้เรียน ชุด "ของดีเมืองสระแก้ว" จำนวน 5 หลักสูตร ดังนี้

- 1) ดอกไม้ข้าวโพดของฉันกับวันสำคัญทางศาสนา ระดับชั้นประถมศึกษาปีที่ 2
- 2) มรดกโลกทางธรรมชาติ อุทยานแห่งชาติปางสีดา ระดับชั้นประถมศึกษาปีที่ 4
- 3) ฤ ปางสีดา มีที่มาจากชื่อนางในวรรณคดีไทย ระดับชั้นประถมศึกษาปีที่ 5
- 4) ข้าวหลามวัฒนา ปลอดภัย ได้คุณค่า สดุดตา สดุดใจ ระดับชั้นประถมศึกษาปีที่ 6
- 5) เที่ยวสุขใจ ไปตลาดโรงเกลือ ระดับชั้นมัธยมศึกษาปีที่ 1

ซึ่งในปีงบประมาณ 2562 ทางเขตพื้นที่การศึกษา ฯ และทางโรงเรียนที่เข้าร่วมโครงการมีความต้องการที่จะพัฒนาหลักสูตรให้ครบทุก ระดับชั้น

กิจกรรมเสริมประสบการณ์การเรียรู้สะเต็มศึกษาสำหรับเยาวชนในพื้นที่ห่างไกล วันที่ 12-16 ธันวาคม 2561 ณ โรงเรียนราชประชานุเคราะห์ 31 อำเภอแม่แจ่ม จังหวัดเชียงใหม่

ศูนย์วิทยาศาสตรศึกษา คณะวิทยาศาสตร์ ได้ดำเนินการร่วมกับโรงเรียนราชประชานุเคราะห์ 31 และโรงเรียนสาธิตชุมชนการเรียนรู้สมเด็จ ย่า วิทยาลัยโพธิวิชชาลัย มศว แม่แจ่ม จัดฐานกิจกรรมสะเต็มศึกษา โดยใช้ชื่อกิจกรรมว่า "สะเต็มหรรษา" ลักษณะของการจัดกิจกรรมเป็นการเน้นการ ออกแบบสิ่งประดิษฐ์ที่ประยุกต์ใช้องค์ควารู้ทางด้านสะเต็มเพื่อเสริมสร้างและส่งเสริมศักยภาพและความรู้ทางด้านสะเต็มและคุณลักษณธและทักษะการ เรียนรู้ในศตวรรษที่ 21 ซึ่งจัดกิจกรรมเป็นฐานการเรียนรู้ ผู้นำกิจกรรมของแต่ละฐาน คือ อาจารย์ นิสิตระดับบัณฑิตศึกษา คณะวิทยาศาสตร์ มีจำนวน ผู้เข้าร่วมกิจกรรม 619 คน ผู้เข้าร่วมกิจกรรมมีความพึงพอใจในภาพรวมอยู่ในเกณฑ์ระดับดีมาก ค่าเฉลี่ย 95.39% ทั้งนี้การจัดกิจกรรมการเรียนรู้ STEM มีส่วนให้นักเรียนเกิดแรงบันดาลใจในการเรียนรู้วิทยาศาสตร์มากขึ้น แล้วยังเสริมสร้างให้ครูได้รับการพัฒนาตนเอง โดยสามารถนำรูปแบบการ จัดกิจกรรมไปประยุกต์ใช้ในการจัดการเรียนการสอนได้

### **%** Result

สามารถสร้างหลักสูตรและพัฒนาหลักสูตรและแผนการจัดการเรียนรู้สำหรับหลักสูตรในแต่ละระดับชั้น จำนวน 5 ระดับชั้น ได้แก่ ระดับชั้น ประถมศึกษาปีที่ 2 ระดับชั้นประถมศึกษาปีที่ 4 ระดับชั้นประถมศึกษาปีที่ 5 ระดับชั้นประถมศึกษาปีที่ 6 ระดับชั้นมัธยมศึกษาปีที่ 1 โดยหลักสูตรที่ ได้รับการพัฒนานั้นส่งเสริมคุณลักษณะและทักษะการเรียนรู้ในศตวรรษที่ 21

...Organized by Faculty of Science...



#### โครงการบ้านนักคณิตศาสตร์



- 1. เพื่อให้นิสิตได้ฝึกประสบการณ์ในการทำงนรวมกับผู้อื่น มีกระบวนการทำงานอย่างมีประสิทธิภาพ ได้ใช้เวลาว่างให้เป็นประโยชน์โดยใช้ กิจกรรมเป็นสื่อกลาง และได้ฝึกปฏิบัติการในสถานการณ์จริง
  - 2. เพื่อเสริมสร้างคุณธรรมด้านจิตสำนึกสาธารณะ ให้กับนิสิตและอัตลักษณ์นิสิต
  - 3. เพื่อพัฒนานักเรียนให้มีทักษะและกระบวนการทางคณิตศาสตร์

### **Result**

สามารถพัฒนานักเรียนในเขตพื้นที่การศึกษาประถมศึกษานครนายก (โรงเรียนวัดโยธีราษฎร์ศรัทธาราม โรงเรียนวัดวังปลาจีด และโรงเรียน วัดโคกลำดวน) ให้มีทักษะและกระบวนการทางคณิตศาสตร์ ผ่านการจัดกิจกรรมการเรียนรู้คณิตศาสตร์หลายรูปแบบที่ทำให้นักเรียนสนุกกับการเรียนรู้ วิชาคณิตศาสตร์

...Organized by Faculty of Science...



#### โครงการศิลปกรรมบำบัดเพื่อการพัฒนาศักยภาพมนุษย์





โครงการศิลปกรรมบำบัดเพื่อการพัฒนาศักยภาพมนุษย์ จัดทำขึ้นเพื่อนำกิจกรรมทางด้านศิลปกรรมบำบัดมาใช้เป็นเครื่องมือในการพัฒนา ศักยภาพมนุษย์ กิจกรรมศิลปกรรมบำบัดนี้สามารถช่วยสุขภาพร่างกายและสุขภาพจิตเป็นการเพิ่มประสิทธิภาพของการเคลื่อนไหวร่างกาย พัฒนา กล้ามเนื้อมัดเล็กและกล้ามเนื้อมัดใหญ่ให้มีสมรรถภาพเหมาะสมตามเกณฑ์ของช่วงวัย ส่งเสริมความคิดสร้างสรรค์ ความฉลาดทางอารมณ์ ความ ภาคภูมิใจในตนเอง การปรับตัวเข้ากับสังคม ทักษะการช่วยเหลือตัวเองในชีวิตประจำวัน เป็นต้น ซึ่งตอบสนองต่อความต้องการทางด้านร่างกายและ อารมณ์ กิจกรรมจัดขึ้น ณ ศูนย์พัฒนาเด็กเล็กองค์การบริหารส่วนตำบลเขาเพิ่ม จังหวัดนครนายก มีเด็กอายุระหว่าง 4 – 6 ปี เข้าร่วมจำนวน 164 คน

### 🍘 Result

เด็กอายุระหว่าง 4 - 6 ปี ของ ศูนย์พัฒนาเด็กเล็กองค์การบริหารส่วนตำบลเขาเพิ่ม จังหวัดนครนายก จำนวน 164 คน ได้รับการพัฒนา สุขภาพร่างกายและสุขภาพจิตใจ ให้มีสมรรถภาพเหมาะสมตามเกณฑ์ของช่วงวัย โดยจากการทำกิจกรรม พบว่า เด็กผู้เข้าร่วมโครงการมีการพัฒนา ทางด้านกล้ามเนื้อ ความคิดสร้างสรรค์ การเข้าสังคมของเด็กเล็ก สมาธิ และความกล้าแสดงออกนำไปสู่การพัฒนาทางด้านจิตใจที่ดี ในระดับที่ร้อยละ 89.56

...Organized by Faculty of Fine Arts...



#### Development Of Natural Products To Support Community Enterprises





This project aims to increase the quality of cosmetic products in Nakhonnayok by enhancing the efficacy of the cosmetic products and reduce the toxicity and irritation of the products. One of the activities supporting the objective of this project is to test if the cosmetic products sold in Nakhonnayok has been contaminated with microbes or not. We use scientific method which is approved by Thai FDA to test the contamination of microbes listed by the Thai FDA. These microbes are Aerobic plate count, Staphylococcus aureus, Escherichia coli, Pseudomonas aeruginosa, Candida albicans, and Yeast and Mold. The test has been performed by a professor and students in the Faculty of Pharmacy, Srinakharinwirot university. The test was run for three samples for each product. There are more than 35 products tested from our project in 7 years of project. The results show that approximately 20% of all tested products have been contaminated by microbes, especially fungus and mold. The manufacturers of products that have microbial contamination were called and asked to come to discuss with our consulting team. The consulting team led by another professor who is specialized in product development at the Faculty of Pharmacy told them the results, the meaning of the results, and the significance of sterility of products-how contaminated products can be very dangerous. The consultant explained and gave the manufactures the way to get rid of the microbes and the way to prevent the products from microbial contamination. We found that the factor that mostly causes contamination is contaminated water used to prepare cosmetic products. The second most common cause of the cosmetic contamination is contaminated natural extract added into the cosmetic products. The third cause is the non-use of antimicrobial as a preservative of the cosmetics. From these findings, we transfer this knowledge to the manufacturers and educate them how to avoid contamination. We also visit their production sites to observe how to manufacture products to make sure that the equipment and place are conformed with cosmetic manufacturing standard.

In addition to microbial contamination, we have tested the irritation and hypersensitivity caused by cosmetic products in Nakhonnayok. Each year we collected 1 product to test with 30 human volunteers to see that cosmetic product irritate or induce hypersensitivity reaction to human skin. This



test was approved by ethics committee of Srinakharinwirot University. This activity is aimed to ensure safety of products sold in the market of Nakhonnayok. The results show that all products tested pass. There are no products causing irritation and hypersensitivity to human skin, which means that they are safe to use.

Another activity that we continually do for all 7 years of the project is to educate cosmetic manufacturers in Nakhonnayok. We organized two lectures plus workshop two times a year to educate cosmetic manufacturers and people who are interested in producing cosmetics for sale. The participants of this activity are shown how to formulate high quality products, how to control the quality of products, how to design packaging of products, how to register products, and how to conform to cosmetic Good Manufacturing Practice (GMP). The speaker are both faculties in the Faculty of Pharmacy, Srinakharinwirot University or are invited speakers from other organizations. The participants were asked to evaluate satisfaction and useful of this activity. The results reveal that more than 95% of participants satisfy with this activity, which they mentioned that they gain more knowledge and were fun. More than 85% said that contents in the lectures and workshop can be used in their real life.

Another activity we performed in this project is to formulate new cosmetic products for people in Nakhonnayok and teach them how to prepare it in large scale manufacturing, as requested. There have been more than 3 0 products that professors and students of the Faculty of Pharmacy, Srinakharinwirot University formulated so far and many of them were registered and sold to the market, both national and international market. The products are tested for physical stability to ensure that they will be expired within the expiry dates before delivery to the manufacturers.

Anytime cosmetic manufacturers have problems, they have channels to contact a consultant of the project 24/7 by line application, phone call, and meeting in person. All these activities are free of charge. They are supported by Srinakharinwirot University.

### **%** Result

SME manufacturers have learned about the research and development of natural products so that they can be further developed by themselves. They also learned the proper production process and realized that customer health should come first

...Organized by Faculty of Pharmacy...



### Botanical Garden Of The Faculty Of Pharmacy, Srinakharinwirot University





The botanical garden of Faculty of Pharmacy, Srinakharinwirot University is set in 3.7 hectares of an agricultural land reform area at Banna district in Nakonnayok province. This land was originally considered to be a waste area because the soil was highly acidic and several plant species consequently did not grow well. Collaboration with two organizations, Agricultural Land Reform Office and Land Development Office, for more than ten years, Faculty of Pharmacy has eventually improved the soil condition at the botanical garden by liming technique and "green manure strategy". The land is shaped to form slope and curve in order to facilitate water irrigation and drainage. Bamboo trees and Dipterocarpus trees, have been grown around the botanical garden as wind breaking. Various kinds of perennial trees have been initially grown in order to provide shade and host of climbing vines. Then selective shrubs and herbs have successfully been cultivated (figure 1).

Faculty of Pharmacy also has collaboration with traditional doctors and local people. They not only provide various kinds of medicinal plants but also transfer their local wisdom related to traditional use of these plants. The botanical garden now collects approximately 400 medicinal plant species and still move forward to collect more medicinal plants. The botanical garden also serves community for recreation area and workshop activities related to how to use herbs and herbal products safely. In addition, the botanical garden facebook has been established to communicate information and activities to community for nearly five years.



### **%** Result

To encourage lifelong learning, the botanical garden has provided several types of learning resources. Facebook and website have been set up to publish our reading materials and short video clips about herbal medicines.

To create learning opportunities, the botanical garden has regulary arranged workshops which are open to anybody who is interested in studying the use of herbs and medicinal plants. The botanical garden has also provided special workshop for school students to encourage young people to know traditional Thai medicine.

...Organized by Faculty of Pharmacy...



### The Development Of English Language Proficiency Among Locals Living Around Cross Border Economic Zones In Sakaeo Project









The number of students in schools located in the rural border between Thailand and Cambodia in Sa Kaeo province does not have equal opportunity to access to good quality in education, especially English education. This is because the schools in this area do not have enough qualified and professional teachers who can provide appropriate teaching methods or activities to enhance students' knowledge. As lacking of opportunity to study with qualified teachers, the average English scores in the Ordinary National Educational Test (ONET) of the students in the schools in border areas of Sa Kaeo provinces are the lowest when compared to other provinces. International College for Sustainability Studies, Srinakharinwirot University, therefore, has initiated the educational project entitled "Developing English Language Proficiency among Locals Living in the Border between Thailand and Cambodia in Sa Kaeo Province" to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. The project comprises of three main activities which aim to (i) increase the English language proficiency of students studying in the target schools, (i) enhance English skills and intercultural communicative competence of immigration officials working for Sa Kaeo Immigration Office, and (i) ensure that teachers teaching English in schools located in the rural border between Thailand and Cambodia in Sa Kaeo province are able effectively write the English tests in accordance with ONET.



### **%** Result

There are 370 participants (19% adults and 81% teenagers) who have opportunity to receive the trainings with the aims to improve their English proficiency. These participants are both male and female with almost equal numbers for each gender.

There are 30 teachers divided into 20 teachers in primary level and 10 teachers in lower-secondary level who received pedagogical training required for teaching at their relevant level.

Project Owner: Aj. Wachirapong Yaemtui ... Organized by International College for Sustainability Studies...



### โครงการพัฒนาหลักสูตรฝึกอบรม เรื่อง การผลิตสื่อการเรียนรู้ เพื่อพัฒนาศักยภาพผู้เรียน





สำนักสื่อฯ ได้ร่วมมือกับ อบต.หนองตะเคียนบอน จังหวัดสระแก้ว และได้มีการพัฒนาแอปพลิเคชันเพื่อการเรียนรู้พฤกษศาสตร์ ชื่อ NTKB และดำเนินการเผยแพร่แอปพลิเคชัน NTKB (Nongtakienbon) ผ่านทาง Google Play และ App Store และจัดทำหลักสูตรการจัดการ เรียนรู้เชิงรุก (Active Learning) ร่วมกับแอปพลิเคชัน NTKB และได้นำกระบวนการการเรียนรู้ที่ส่งเสริมให้ผู้เรียนได้เรียนรู้ด้วยตนเอง โดยมีการ ลงมือปฏิบัติและเรียนรู้อย่างมีปฏิสัมพันธ์ (กิจกรรมศึกษาพืชสมุนไพรในป่าด้วยแอปพลิเคชัน NTKB) จนเกิดควา มรู้ความเข้าใจไปทดลองใช้กับ นักเรียน ครูและบุคลากร ณ ศูนย์อนุรักษ์พันธุกรรมพืชอันเนื่องมาจากพระราชดำริสมเด็จพระเทพรัตนราชสุดาฯ สยามบรมราชกุมารี (อพ.สธ.) บ้าน คลองทราย ตำบลหนองตะเคียนบอน อำเภอวัฒนานคร จังหวัดสระแก้ว

ทั้งนี้ ได้มีการติดตั้ง QR Code สำหรับเป็นแหล่งการเรียนรู้พืชสมุนไพรด้วยแอปพลิเคชัน NTKB (Nongtakienbon) ณ ศูนย์ อนุรักษ์พันธุกรรมพืชอันเนื่องมาจากพระราชดำริสมเด็จพระเทพรัตนราชสุดาฯ สยามบรมราชกุมารี (อพ.สธ.) บ้านคลองทราย ตำบลหนองตะเคียนบอน อำเภอวัฒนานคร จังหวัดสระแก้ว เพื่อเป็นการส่งเสริมการเรียนรู้และทักษะด้านการใช้เทคโนโลยีแก่ผู้สนใจทั่วไป เช่น ประชาชนในพื้นที่ นักเรียน นักศึกษา ฯลฯ ให้สามารถเรียนรู้ได้ด้วยตนเอง และสำนักสื่อฯ ได้มีการติดตามประเมินผลการเรียนรู้และบูรณาการการเรียนรู้ดังกล่าว โดยการบูรณาการ ต่อยอดเป็นงานวิจัยสำหรับตีพิมพ์เผยแพร่ในฐานข้อมูล Scopus นอกจากนั้น สำนักสื่อฯ ได้ส่งผลงานโครงการดังกล่าวเข้าประกวดผลงานการพัฒนา ประสิทธิภาพการปฏิบัติราชการและการให้บริการประชาชนได้อย่างโดดเด่น โดยได้รับเกียรติบัตรจากสำนักงานคณะกรรมการพัฒนาระบบราชการ (กพร.) ว่าเป็นหน่วยงานที่มู่งมั่นในการพัฒนาระบบราชการเพื่อประชาชน

### **%** Result

- 1. จำนวนผลงานที่เกิดจากความร่วมมือระหว่างองค์กร จำนวน 3 ชิ้นงาน ประกอบด้วย สื่อการเรียนรู้ คือ แอปพลิเคชัน NTKB (Nongtakienbon) หลักสูตรการจัดการเรียนรู้เชิงรุก (Active Learning) และบทความวิจัย
  - 2. ความพึงพอใจของผู้เข้าร่วมโครงการ (ระดับมาก ค่าเฉลี่ย 4.35)
- 3. สัดส่วนของเด็กและผู้ใหญ่ที่มีทักษะเทคโนโลยีสารสนเทศและการสื่อสาร (ไอซีที) จากจำนวนประชากรตำบลหนองตะเกียนบอน 7,916 คน สามารถเข้าถึงเทคโนโลยี จำนวน 100 คน จากจำนวนประชากรอำเภอวัฒนานคร จำนวน 74,404 คน คิดเป็นสัดส่วน 10.63



### Integrated Farming By Sufficiency Economy Guidelines Project: Workshop For Biodiesel Production And Agriproduct Processing



This project was organized by the civil society process concept called "BOR WORN" which means home, temple and school (HTS) that leads main community institutions, namely 1) social institution that includes village headman, sub-district administrative organization members, farmers and B.Grimm Mushroom Farming Group 2) religious institution that includes abbots and monks at B.Grimm Temple and 3) educational institution that includes teachers and students at B.Grimm School and Ban Nong Yai School to become strategies for community development through the most appropriate technology for social environment and culture. This is to utilize technology within community without having subject specialists.

Biodiesel production is composed of water tank, faucet, mixing tank, boiler, PVC pipe, glove, methyl alcohol, Sodium Hydroxide, thermometer, etc. However, these pieces of equipment are accessible and easy to buy. On the training day, pamphlets were provided and a vinyl banner of biodiesel production process was set up to participants, villagers at B.Grimm Temple Learning Center. Nonetheless, the villagers can witness and pay attention to learn about biodiesel production, donate used cooking oil and try out biodiesel with agricultural machinery on their own.

After the completion of the project, the participants who attended a workshop had learnt about biodiesel production process that made from used vegetable oil and could follow instructions on their own. Weerapanyo, an abbot at B.Grimm temple, applied knowledge that received from the workshop together with his own adaptation and gradually created his own. He then gave his biodiesel to farmers within community to test with their agricultural machinery, tractor, electric generator, electric motor, pumping machinery, etc., and it came out successfully as it could be used as an alternative energy.

Moreover, the participants reflexed that the use of biodiesel was not effected the cost of production when oil price increases because the first step of producing biodiesel is to get the used oil donation from community members, stores and restaurants. Furthermore, the participants can also pass



on knowledge through those interested in and set products in the "Province Mobile Unit" Exhibition at B.Grimm School, Khlong Thap Chan, Aranyaprathet, Sakaeo on April 23, 2562.

In addition, the participants had an idea of agriproduct processing from students who attended SWU 374 (ETHICAL CAREERS FOR COMMUNITY) and showed participants new menus like crispy banana chili paste, steamed fish with curry paste and taro, banana cake, and banana soap.

### **Result**

The effects and impacts of research are

- 1) the community can live self-sufficiently (self-sustaining commune), reduce household expenses, reduce diesel costs by using biodiesel with a variety of engines such as pushcart, tractor, pumping machinery, electric generator and pick-up truck and
- 2) in case of agricultural products are oversupply, knowledge of agricultural product processing can add more sales channels, add value to products, and generate income for the community.

...Organized by Innovative Learning Center...



#### Special Education And Care Pedagogical Training Program





Special Education and Care Certificate Program was established to help teachers who have experience in other teaching disciplines earn the qualifications necessary to teach disabled students. Students must be bachelor's degree holders, often with teaching experience and a basic teaching certification. The certificate prepares teachers to individualize lesson plans and instruction to meet the needs of those with varying disabilities.

Special Education and Care Certificate Program preparing students to:

- Serve as resources and advocates for persons with disabilities in classrooms.
- Work corporately in and outside schools to improve the quality of life for persons with disabilities and their families.
  - Train the effective pedagogy in special education including psychology, clinical and care.

This Certificate program is funded by Educational Promotion and Development Fund for Handicapped under Office of Basic Education Commission (OBEC), aiming to provide an in-service training for updating teachers' skills and knowledge in Special Education. Educational Promotion and Development Fund for Handicapped is offering 80 fully funded scholarships, academic year 2018-2020, for teachers under Ministry of Education who are teaching students with disabilities.



### **(%)** Result

- 1) By 2019, the 40 primary and lower secondary school teachers have finished pedagogical traning related to special education, learning psychology, couseling, and care
- 2) By 2020, the 40 primary and lower secondary school teachers are also received the pedagogical traning related to special education, psychology, and care traning

NOTE: the 40 graduates of the program would benefit persons with disabilities 1,200 people in Bangkok metropolitan and nearby provinces each year.

Project Owner: Asst. Prof. Dr. Sittipong Wattananonsakul ...Organized by Center Graduate School...



## SDG 8 DECENT WORK AND ECONOMIC GROWTH

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all







## SDG 8 DECENT WORK AND ECONOMIC GROWTH

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all



### **Projects List**



โครงการพัฒนาทุนทางวัฒนธรรมชุมชนสู่การส่งเสริมการท่องเที่ยวเชิงวัฒนธรรมจังหวัดนครนายกและจังหวัดสระแก้ว



Sustainable Saving For Nakhon Nayok (**2**Nd Year): Promote Sustainable Practices For Saving Guidelines, Create Additional Careers To Raise Income For Elders And Members In Community



### โครงการพัฒนาทุนทางวัฒนธรรมชุมชนสู่การส่งเสริมการท่องเที่ยวเชิงวัฒนธรรมจังหวัดนครนายกและจังหวัดสระแก้ว





Cultural Capital Development Program is arranged for 2 phases with the design and implementation of sustainable tourism promotion policy to create works and promote local cultures and products.

Phase 1: Workshop "Natural dyeing skill and technique development" is to develop Saotom cloth product at Nong Kowit and Sai Ngam Villages, Sakaew Province. 50 villagers from Nong Kowit and Sai Ngam Villages attended this program. What the community receives is knowledge to develop local products including cloth dyeing skill and technique made from natural materials found in local area such as marigold and mud etc. This program focuses on local strengths and wisdom of Sakaew Province as cultural capital to be combined with the development of know-how regarding fibers and natural dyeing to add values and create unique local products for increasing income of the community.

Phase 2: Light and Sound Performance at Khundan Prakarnchon Dam by cooperating with Nakhonnayok Province. Activities in this program are as follows

1. Light and sound performance "Inheriting routes, creating streams at Khundan Prakarnchon Dam " at Khundan Prakarnchon Dam with exhibition of artworks and art street and colorful glow-in-the-night decorations around the front of Khundan Prakarnchon Dam. Such performance is to promote tourism of Khundan Prakarnchon Dam of Nakhonnayok Province, inspired by historic stories of Khun Han Pitakphrai who passed this inspiration to King Rama 9 to initiated the construction of this Dam to be useful for people. Performers include artists, stars, alumni, students of Srinakharinwirot University and students from schools in Nakhonnayok Province who join Dance of Thai Puan, which is another important ethnic group in Nakhonnayok Province.



2. The activities include booth for community products provided that Nakhonnayok Province coordinates with community shops to put their products for distribution to bring income to people in the community. In such event, there are about 50 community shops opening their booths here.

### **®** Result

Nakhonnayok and Sakaew have been promoted for cultural tourism and community products developed from "cultural capital" of each province and extended to be cultural and local works and products under cooperation of the community.

...Organized by Faculty of Fine Arts...



Sustainable Saving For Nakhon Nayok (2Nd Year): Promote Sustainable Practices For Saving Guidelines, Create Additional Careers To Raise Income For Elders And Members In Community





IMPROVE RESOURCE EFFICIENCY IN CONSUMPTION AND PRODUCTION

The Faculty of Economics Develop academic service plans for Nakhon Nayok society that is in line with the needs of the society. Moreover, Faculty of Economics has created a project to promote sustainable practices for saving guidelines, creating additional careers to raise income after agriculture for the elderly and members of the community (Year 2) are as follows:

- 1. Training Workshop on Sustainable Savings for Community in Khok Kruat Subdistrict, Pak Phli District, Nakhon Nayok Province by promoting the process of saving household accounts from adding value of banana peels with fermented products. As a result of the product brings it together with the planning of training sessions with the community to build vegetable gardens for good physical and mental health of the elderly.
- 2. Training on how to grow organic vegetables without chemicals, promote health and save money in the household.
- 3. Training on the edge of the kitchen garden to grow vegetables for fun and health for the elderly along the roadside of the community.
  - 4. Promoting the sale of organic vegetables to create residual income.
  - 5. Promoting the cultivation of vegetables for consumption and health care for the elderly

### **%** Result

The Academic Service Project for the Society of the Faculty of Economics is a free academic service project. It is able to summarize the impact on the community that occurred under the Grant Assistance Program on Promotion Sustainable Savings for Community in Khok Kruat Subdistrict, Pak Phli District, Nakhon Nayok Province: Promoting the process of saving household accounts by adding value of banana peels with fermented products. As a result of the products bring it together with the planning of training sessions to build vegetable gardens for good physical and mental health of the elderly.



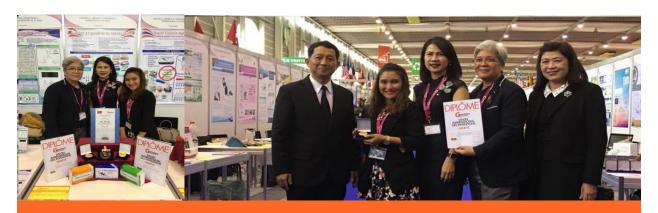
Economic Effect, there is training on planting organic vegetables without chemicals to promote health and save money in the household. Furthermore, the community can apply the input - output account to manage and allocate the amount of money received and paid out, leading to the remaining "savings" together with steadily moving forward after the project ends. There is also an extension of sales promotion of organic vegetables in order to generate income for the elderly in community.

Society Effect, training is to grow organic vegetables for fun creating the good health for the elderly. The elderly live happily with the people in the community and start aware on the own values because they can sell vegetables earning income for the family.

Environmental Effect, it can reduce the amount of waste in the community from banana peel by using fermented products causing communities on reducing the pollution . In the same time, communities can reduce the opportunity cost from banana peels to bring increased savings and promoting vegetable cultivation for consumption and health care for the elderly.

The results from the academic service area for the community this year are satisfactory for all 3 parties, which those are community members, the Faculty of Economics members, and Srinakharinwirot University in which this 3rd project was selected and accepted for presentation at the 6th Engagement Thailand Symposium at Uttaradit Rajabhat as confirmation of operations that are in line with the King's mission to create value and develop sustainable local communities be true.

...Organized by Faculty of Fine Faculty of Economics...



### SDG 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation







# SDG 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation



### Projects List





#### Center Of Excellence In Biosensors





According to Thailand 4.0 policy, Center of Excellence in Biosensors has focused on research and development of "Rapid Diagnostic Tests (RDTs)" for detection and identification of various diseases that are crucial problems of country. The main purposes of RDTs are to minimize the detection times and costs as well as rapid, sensitive, specific, and convenient which can be completed as point-of-care test plus data analysis and management on smartphone application. The tests are suitable tool for surveillance, precaution, prevention and treatment planning of diseases.



Decrease ratio of import: export from 90:10 to 70:30

...Organized by Faculty of Medicine...



### **SDG 11 SUSTAINABLE CITIES AND COMMUNITIES**

Make cities and human settlements inclusive, safe, resilient and sustainable









Make cities and human settlements inclusive, safe, resilient and sustainable



### **Projects List**





### Thai-Phaun Development Community Museum Project At Nongseang Subdistrict, Pakphli District, Nakhonnayok Province





This project have 3 phases as following:

Phase 1: The committee processing by studying the problems and guidelines for promoting the learning of agricultural wisdom of the community in accordance with Thai Phuan way with the community.

Phase 2: The committee collected information on agricultural wisdom with the community by holding a group discussion to find a consensus on the agricultural learning center model and the exhibition for learning agricultural wisdom according to the Thai-Phuan way which are released to the needs of the community.

Phase 3: Renovate the area and install learning promotion exhibition at Thai Phuan Community Rice Mill Nakhon Nayok Province to be ready to produce publications to disseminate knowledge and agricultural wisdom of Thai-Phuan people at Nakhonnayok Province by the permanent secretary and the president of Nongsaeng Subdistrict Administrative Organisation that is honored as the president to open a community agricultural learning center.



Thai-Phaun village at nongsang subdistrict, nakhonnayok province have center of local culture learning in terms of agriculture wisdom . This project use budget 775,819 THB.

Project Owner: Dr.Prattana Kongsamran ...Organized by Institute of Culture and Arts...



### **SDG 12 RESPONSIBLE CONSUMPTION & PRODUCTION**

Ensure sustainable consumption and production patterns







# SDG 12 RESPONSIBLE CONSUMPTION & PRODUCTION

Ensure sustainable consumption and production patterns



### Projects List





#### Trash Hero By Swu









September 15th, 2019, 80 students from Faculty of Social Science, Faculty of Humanities, Faculty of Fine Arts, International Colleage for Sustainability Education and Facuty of Environmental Culture and Ecotourism Srinakharinwirot University, the foreigner and Trash Hero Bangkok with collaborating with Department of Drainage and Sewerage, Bangkok Metropolitan Administration. We collected many trash along San Saeb canal and within Srinakharinwirot University. Today, the total amount of trash on San Saeb canal is approximately 240 kg. whereas, the trash around SWU is 48.8 kg including 15 kg of recycle waste including plastic bags, hard plastic, and glasses as well, 1.0 kg of foam, and 32.3 kg of general trash. Thank you so much to all students, the foreigner and volunteers who dedicate time for cleaning up for community and the environment. This activity is one mission of the university responsibility to the community and our world.

### Result

- 12.2.1 classification and identification the properties municipal waste, the results shown that in 1 day activities, the total amount of collected trash consisted of 31.25 wt.%, 2 wt.% and 66 wt.% of recycle waste, foam and general trash, respectively.
- 12.2.2 we analysed the life cycle assessment for the recycle trash by the manufacturers and the portion of that plastic.





### **SDG 14 LIFE BELOW WATER**

Conserve and sustainably use the oceans, seas and marine resources for sustainable development



### **Projects List**



โครงการวิจัยเพื่อพัฒนาวิธีการตรวจการติดเชื้อไวรัส และแบคทีเรียในกัง



#### โครงการวิจัยเพื่อพัฒนาวิธีการตรวจการติดเชื้อไวรัส และแบคทีเรียในกุ้ง







โครงการวิจัยเพื่อพัฒนาวิธีการตรวจการติดเชื้อไวรัส และแบคทีเรียในกุ้ง

### **Result**

อุตสาหกรรมการเพาะเลี้ยงกุ้งทะเลชนิดต่างๆ เช่น กุ้งขาว (Penaeus vannamei) และกุ้งกุลาดำ (P. monodon) เป็นอาชีพสำคัญ ของเกษตรกรไทยที่สร้างรายได้ให้กับประเทศอย่างมาก ดังนั้นเพื่อให้อุตสาหกรรมการเลี้ยงสัตว์น้ำชนิดนี้ดำเนินไปอย่างมีประสิทธิภาพและยั่งยืนจึงควร ศึกษาวิจัยและสร้างบุคลากรผู้ชำนาญการด้านต่างๆ เพื่อรองรับการขยายตัวของอุตสาหกรรมนี้และแก้ปัญหาต่างๆ ในระบบการเลี้ยงเพื่อดำรงสถานะ ผู้นำการผลิตกุ้งต่อไปในอนาคต ทั้งนี้ปัญหาที่สำคัญที่สร้างความเสียหายเป็นจำนวนมากให้กับเกษตรกรผู้เลี้ยงกุ้ง ได้แก่ การเกิดโรคระบาดต่างๆ ที่เกิด จากการติดเชื้อไวรัสและแบคทีเรียซึ่งก่อให้เกิดความเสียหายและสูญเสียอย่างถาวร ทั้งนี้การพัฒนาวิธีการตรวจการติดเชื้อไวรัสและแบคทีเรียด้วยการใช้ กระบวนการทางภูมิคุ้มกันวิทยา (immunology) โดยการผลิตโมโนโคลนอลแอนติบอดี (monoclonal antibody: MAb) จำเพาะต่อเชื้อ ไวรัสและแบคทีเรีย และสามารถใช้แอนติบอดีเหล่านี้มาพัฒนาเป็นชุดตรวจแบบแถบสี ซึ่งเกษตรกรสามารถใช้ตรวจได้ด้วยตนเองภายในฟาร์มโดยไม่ จำเป็นต้องใช้เครื่องมืออื่นเพิ่มเติม สามารถทราบผลได้อย่างรวดเร็ว และสามารถใช้เฝ้าระวังการติดเชื้อไวรัสหรือแบคทีเหล่านี้ในระหว่างการเลี้ยง ซึ่งชุด ตรวจเหล่านี้มีความไวในการตรวจและความแม่นยำสูง

...Organized by Faculty of Science...



# Srinakharinwirot University

114 Sukhumvit 23, Bangkok 10110, Thailand. Tel +66 2 649 5000, Fax +66 2 258 4007 www.swu.ac.tt , https://sdg.swu.ac.th