

SERVICE LEARNING



Career Guidance Unit

Faculty of Science

University of Colombo



Introduction

Service Learning (FS 3002) is a unique experience that combines academic coursework with meaningful service activities and critical reflection on that service. Students engaged in service-learning provide community service in response to community-identified concerns and learn about the context in which service is provided, the connection between their service and their academic coursework, and their roles as citizens. Emphasis is placed on reflection, active student participation, and connecting the curriculum to the real world.

There are four types of service learning programmes.

1. Direct service: Students' service directly involves and affects recipients
2. Indirect service: Students do not directly see any specific recipients. Student actions benefit the community as a whole.
3. Advocacy: The intent of advocacy is to create public awareness on an issue of public interest.
4. Research: Finding, gathering, analyzing and reporting on issues of public interest.

Service learning projects have become popular in many universities around the world, and a considerable amount of literature is available. But, we are the first university to implement such a programme in Sri Lanka. Our **Service Learning Programme** is a **Triple Helix** model where 3 parties work together. Those three parties are selected community, University (undergraduates and academic supervisors) & Cooperate sector (sponsors of each project).

Faculty of Science provides opportunities for undergraduates to foster habits of public engagement through Service Learning. The outcome of this programme for the undergraduates would be academic achievement, acquisition of transferable skills required for the world of work, and inculcation of a sense of citizenship and social, professional and ethical responsibility.



Service Learning was introduced to the curriculum of the Faculty of Science in 2012, as an academic credit levying programme. Since 2012, Service Learning projects were successfully implemented through the Career Guidance Unit of the Faculty of Science during the second semester of each year. Sponsorships and cooperate supervision provided by various leading companies of Sri Lanka.

Prof. Deepthi Wickramasinghe, the co-director of the CGU and the chief advisor of the overall program and the co-chairpersons, Dr. Ayomi Witharana and Dr. Sameera Ariyawansa guides the program with the dedicated academic mentors (2021) of the faculty.

We do Service-Learning projects on different fields as follows,

- Education
- Health and Nutrition
- Projects on leadership, Capacity building and Innovation
- Environmental Conservation

Our Corporate partners



Our Journey since 2012

Service Learning Projects 2012

CARE FOR OUR OWN

Objectives derived from the task was providing the project sponsor satisfactory deliverables, Making drinking water available to the areas identified, to reduce the shortage of drinking water in Sri Lanka as much as possible, to make them aware of **Rain Water Harvesting**, Learning and gaining experience through serving the community. Project was sponsored by Brandix Lanka Ltd.



The well under construction

DRINKING WATER QUALITY IMPROVEMENT

Objective was to investigate and find a solution for drinking water problem in Nelumwewa. Prof. D. Wickramasinghe and Dr. M. N. Kaumal were academic mentors for the project “Drinking Water Quality Improvement in Nelumwewa”. The project was sponsored by Holcim Lanka Ltd. This project was focused on the drinking water issue in a rural village named Nelumwewa near Palavi in Puttalam, where the villagers suffered from lack of rainfall and natural water resources. The only water supply they have is barely suitable for drinking purposes hence they tend to purchase water from the market which is not a financially viable solution. As a solution a low-cost filter was suggested to be provided to the villagers. The suggested filtering system was built as a prototype. Simultaneously as a mini project, an abundant tank which was built by Holcim Lanka Limited near Pubudugama was renovated and a banner was put up reminding the villagers to care for the tank.





Renovations and educating through posters

MALNUTRITION AWARENESS PROJECT

Objectives of this project were to identify malnourished students among schools in Rathmalana area and educate school children on healthy diets and adopting to a healthy behavior. Also a Health club formation was carried out. They evaluated the progress after a specific time period. Project was sponsored by Glaxo Smith Kline PLC (GSK) in collaboration with Ministry of Education.



Health camps Workshops



Educating through programs

Leaflets for the students

Service Learning Projects 2013

CARE FOR OUR OWN

Same as the year 2012, objectives were to meet and assist the communities those having water issues all across the country. The project was sponsored by Brandix Lanka Ltd.

VILLAGE ADOPTION PROJECT – HALMILLEWA

There were few Objectives. Main objective was to access to basic infrastructure like water, power, pre-school and school infrastructure, etc. Secondly to Livelihood Development via farmer organization, women’s society. Finally to educate Infrastructure and facility development. John Keels Foundation sponsored the project.

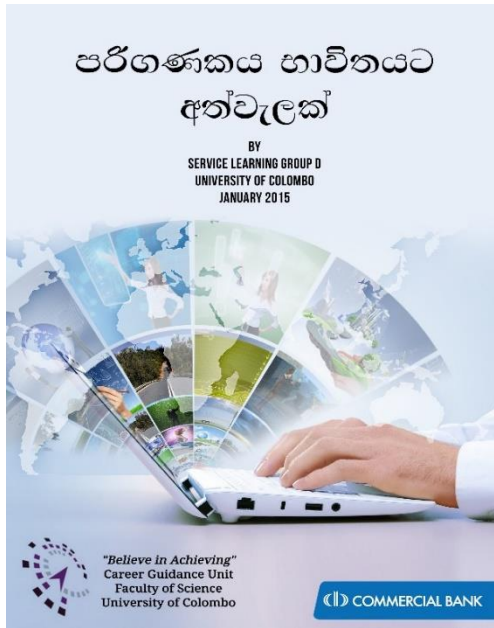
“SIHINA NIWASA” – A HOUSE FOR A NEEDY EMPLOYEE

Objective of “Dream House” project – a low cost house for a needy employee in line with Echo – housing concept was cooperate sponsored by SLT Human Capital Solutions (PVT) Ltd. This Echo Housing concept was focused on reducing environmental damage and pollution, improve the efficiency of using natural resources and energy and diminishing negative impacts on human health.



TRAINING PROGRAMME FOR SCHOOL CHILDREN IN ONLINE EDUCATION

This project was intended to uplift the knowledge of school children, enabling them to be globally competent. And also to introduce Online Learning for school children. Under this project they have introduced educational websites to school children (ex: Khan Academy, E-thaksalawa, Rupavahini Jathika Pasala) also developed a guide book to utilize IT labs and websites. The project was sponsored by Commercial Bank PLC.



AWARENESS ON NUTRITION DEFICIENCIES/GAPS IN SCHOOL GOING CHILDREN

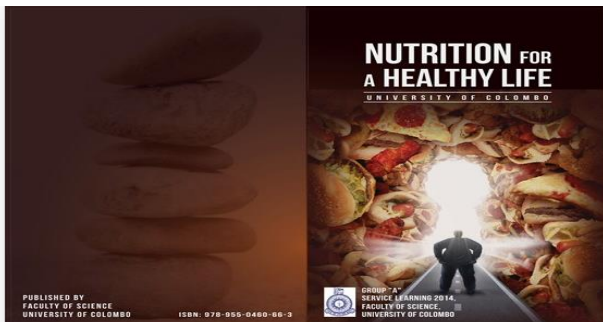
Objectives were to make school going kids aware of the impact of nutrient deficiencies to their growth and development (including cognition), to understand the key causes of nutrient gaps amongst the target audience and to develop a sustainable model in educating and overcoming the said nutrient gaps. The project was sponsored by GlaxoSmithKline (GSK). Main Awareness program of this project was named as “නුවණින් අහර”. Other than that health clubs, were initiated in selected schools.

Service Learning Projects 2014

NUTRITION AWARENESS OF UNDERGRADUATES

Objectives of the project was to find out whether the undergraduates are highly deviated from the general balanced dietary behavior, to evaluate the health condition of undergraduates by using BMI method, to find out whether the residence of the undergraduates have an impact on the food habits and to conduct various activities to aware the undergraduates on burning nutrition issues and the importance of nutrition. For achieve these objectives they have used the following steps.

- Nutrition Status survey
- Publishing the 'Nutrition for a healthy life book'
- Development of 'New Green tea jelly'
- Nutrition awareness seminar
- Pasting important nutrition tips containing stickers at common places
- Distributing leaflets



The nutrition book presented by students

STUDIES ON HUMAN – ELEPHANT CONFLICTS

Main objective of this project was to identify root causes for Human Elephant conflict in Puttalam district, Maduragama and Nelumwewa areas. They have collected information through questionnaire surveys, Literature surveys, attending conferences related to Human Elephant conflict and by meeting resources persons. Holcim Lanka sponsored the project.



Elephant fence project, discussion with Holcim Lanka

IT EDUCATION FOR SCHOOL CHILDREN

Title of the project was English Education Development through Information Technology. The targeted community was the students of the IT labs. The Commercial Bank PLC was the sponsor for this project. The objectives were to uplift the knowledge of English Education of the school children, enabling them to be globally competent. The service learning group visited the selected schools to establish a platform which was used to improve the knowledge of the students.



IT education program for rural students

CREATION OF A BUTTERFLY PARK AND SCHOOL AWARENESS PROGRAMS ON WETLANDS.

The project topic was Creation of a butterfly park and school awareness programme on wetlands. The basic concept of this project was to implement natural habitation for butterflies in the Wetland Biodiversity Park, providing local and international researchers the opportunity to carry out studies on these insects in an urban setting.

A butterfly survey was carried out and a list of prospective butterflies was prepared. With help from many others, the layout for the garden was designed in a way such that it will not disturb the natural wetland vegetation. A special treatment plan was executed prior to introducing the plants, using 100% organic methods. Over 140 days, a typical wetland land mass was converted into a butterfly garden where there are nearly 40 butterfly species recorded up to date. Other than providing bedding, feeding, nesting for the butterflies, the garden also contains many Ayurvedic plants. Apart from the basic lay out, a visitor

is able to see natural organic manure, natural growth regulators and some of the natural effective microorganism-soil conditioners in the set. Corporate partner for the project was Sri Lanka Land Reclamation and Development Corporation (SLLRDC).



The butterfly garden project discussions at site



The next phase of the butterfly garden

Service Learning Projects 2015

URBAN WETLAND PROJECT

The main objective of our project is to design the visitor management plan for the Thalawathugoda Bio diversity study park which is operated and managed by SLLRDC Wetland division. Main areas covered in this project were,

- Build the proposed bridges as an entrance to the wetland
- Clean and develop the dam
- Complete the nature trail at least up to the watch tower
- Build the watch tower
- Implement benches and other resting places
- Implement information boards
- Arrange activities for children and adults
- Clean the canal and other water resources
- Replace plants to improve the value of the wetland
- Educate the near residencies about the value of the wetland
- Ensure the safety of the implemented facilities





SCHOOL TO OFFICE (S2O) PROGRAM

Corporate Sponsor was HNB Assurance. Conversion of School Leavers to Professionals was done through this program.

Main objectives of this project were,

- Assist in developing skills of Sri Lankan youth
- Develop skills in leadership, teamwork, organizing of the team
- Incorporate professionalism into the value system of the team members



Activities and workshops

ENGLISH EDUCATION DEVELOPMENT THROUGH INFORMATION TECHNOLOGY

Corporate partner was Commercial Bank PLC. Team Developed an English Club to encourage students to use IT for English education. Other than that, motivate students to learn English, Pilot visits, Workshops and introduce e-learning were the main project plans.



Workshops for students



Interface of the online learning system

Service Learning Projects 2016

“INNOVA MINDS”

The project “Innova Minds” was organized by Group A with the collaboration of cooperate sponsors, Commercial bank, Singer PLC, and 3I Training solutions (Pvt) Ltd, with the main intension of uncovering the young inventors to the outer society. Key objectives of the project were to endow young creative inventors to the nation, promote new inventions socially and commercially, develop leadership skills of young inventors, and motivating young generation for new inventions. Also the project was categorized as designing, advertising, learning through collecting data, flow of the competition and analyzing.



Workshops conducted for the young inventors

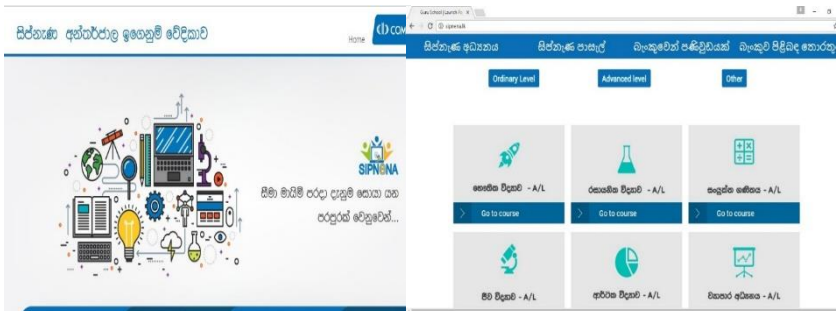
LEARNING WITH INFORMATION TECHNOLOGY(Self-study using offline software package)

This was basically on “e-learning”. The corporate partnership was provided by Commercial bank. Intended project objectives were to encourage children in rural areas for e-learning concept while making them aware of self-learning. Further, this was aimed at encouraging students to use IT in every field to make their education easy and this was focused on helping teachers by giving an offline resource to teach with technology.

The basic project was initiated with introducing what is the project and what is IT and e-learning. Under this CSR project, offline system, DVD formats were covered and also the contents were delivered in Sinhala medium in a descriptive manner. During the implementation, workshops for teachers and students were conducted. Monitoring and controlling was done by the weekly submitted reports.

Questionnaires were given to the teachers and students to analyze computer literacy of the students, including the purposes of using the computer technology, reasons for not doing the online learning, uses of educational software for teaching were assessed through this project.

කොමර්ෂල් ධරණයේ 'සිපනාණ' අධ්‍යාපනික වෙබ් අඩවිය Microsoft Cloud අවකාශයට



The web page launching out of the “Sipnana” – wisdom online project with commercial bank.

STEP TO THE FUTURE (Introducing and promoting E-Learning for a better future)

This project was aimed to provide awareness on e-learning software and to provide awareness on online education facilities along with develop management, leadership and communicative skills of the members. Corporate partners were Commercial bank and Headstart (Pvt) Ltd. Stakeholders of the project were principals, teachers and students of three schools selected. Basic program structure was developed after several pilot visits to that schools. Installation and activation of the software was followed with several workshops for teachers and students on offline education and basic IT. Divulankadawala Central College, Kathaluwa Central College, President's College, Veyangoda, have been selected.

Data collection was carried out using standard questionnaires, Google form and the results were statistically analyzed using advanced software. Weekly reports were submitted to the Carrier Guidance Unit and Google form was used to monitor the importance of the workshop for term-end examination. Undergraduates who were involved, benefitted from improving in the areas of time management, workshop planning, leadership skills, public speaking and problem solving. On the other hand, targeted student bodies were able to improve their software knowledge. Teachers were able to improve their teaching techniques. As a contrasting fact concluded from this particular project, the importance of the providing "lab facilities" for e-learning in schools were emphasized.



Offline education workshops and basic IT workshops for teachers

Service Learning Projects 2017/ 2018

INNOVA MINDS 2017

“Prosperity through inventions and innovations” project was sponsored by Sri Lanka Inventors Commission. Corporate partners were Commercial Bank, Singer PLC and 3I Training solutions (Pvt) Ltd. Main objectives of this project were,

- Endow young creative inventors to the nation
- Promote new inventions socially and commercially
- Develop leadership skills of young inventors
- Motivating young generation for new inventions

Social media and Sri Lanka Inventor’s Commission web site was used for publicity. Awards and T-shirts were distributed among inventors.

VOCATIONAL EDUCATION TO THE SCHOOL COMMUNITY 2017/18

The leading objective of this project is to enhance school children about the importance of the Vocational Training. The Vocational Training Authority (VTA) and Department of Technical Education and Training (DTET) are the main training providers in Sri Lanka sponsored by the government. The project was carried out under the Career Guidance Unit of the Faculty of Science, University of Colombo collaborate with the Corporate Social Responsibility unit of the Commercial Bank PLC.

The project consists of three stages.

- Conducting a presentation session about Vocational Training.
- Maintain a data base of the students which are going to connect to the vocational training.
- Contacting the students and guiding them for vocational training.

Around ten schools were selected and the program was mainly conducted for the grade 11, 12 and 13 students. Each year, nearly 500 students were participated to the project.



LIFE SAVING PROJECT 2017/2018

For the last two years, South Asia Gateway Terminal (Pvt) Ltd collaboratively working with the Life Saving Association of Sri Lanka which focuses on providing water safety education for students.

This is a twelve week program that covers topics regarding water safety along with providing some basic skills to stay safe. There were approximately 70 students taking part in this program and it happened at the Benthota Lagoon. Data was analyzed by pre and post assessments. Furthermore, satisfactory survey was conducted.



EARTH WATCHMAN 2018

The project is associated by Sri Lanka Rupavahini Corporation (SLRC) joining hands with Sri Lanka Cricket. The objective of this program is to make the society aware about intensive tree cutting which is happening currently and the coastline pollution by littering and advert people, and the importance of planting and keeping the environment in a nice and pleasant manner. There were three phases in the project.

- Beach cleaning
- Tree planting district wise
- Enhancing green cover of city of Colombo

The beach cleaning phase is to be carried out from Galle Face to Moratuwa (20 Km). Under this project two million trees are to be planted district wise. The finalized report of “Earth Watchman” project planning was submitted to Mr. Nalin Attygalle (Marketing and Management Consultant of SLRC) and then presented to President Mr. Maithripala Sirisena.



Project Empower 2018

This project carried out by the university students collaboration with Hemas Hospitals to make sure the life of teenagers will not fail and to become productive citizens in the country. The project was simply to make teenagers aware about the career opportunities that are available in reputed companies such as Hemas. The ages from 15 to 18 can be challenging for teens and their parents when they not achieving their life goals. Major outcome of this project is to develop the challenging skills of teenagers and direct them to obtain different career opportunities.

Service Learning Projects 2019

ONE CHILD – ONE TREE 2019

“One Child – One Tree” program is carried out to celebrate every child who is born in to this world by gifting a tree in his/her name. In this project each child is gifted with a plant through the school management. The child is encouraged and motivated to plant and take care of the tree as a precious gift from nature.

This programme had two phases.

- Plants distributing in Puttalam district covering 11 Primary schools
- Plants distributing in Anuradhapura district covering 16 primary and secondary Schools

Around 6000 students were participated in this programme and 6180 plants were distributed. “One Child – One Tree” is sponsored by INSEE Cement Sri Lanka In partnership with Ministry of Education, Colombo Plan, Child Fund Sri Lanka, TARANA Foundation and VOICE as Community Partner. Undergraduates who had involved, benefitted from improving in the areas of time management, planning and event organizing leadership skills. On the other hand, data was collected from targeted student bodies by pre and post assessments. Furthermore, satisfactory survey was conducted.



SIPNANA STEM CLASSROOM

The key objectives of this project were to educate school children about the importance of the vocational training and broaden the knowledge of school community about STEM Class Room. The project was carried out under the Career Guidance Unit of the Faculty of Science, University of Colombo collaborate with the Corporate Social Responsibility unit of the Commercial Bank PLC.

Around ten schools were selected and the targeted bodies of the school were grade 10 and 11 students. After the vocational training programme, a feedback was taken from the students. Also feedbacks were collected from the schools in which “STEM Class room” have already been established in 2018.



SUSTAINABLE BUSINESS DEVELOPMENT PROJECT

Service Learning undergraduates conducted workshops for the Small and Medium Enterprises (SMEs) under the topic of "Sustainable business development with eco-friendly manner".

Main objectives of this programme were,

- Taking steps to avoid investments that are harmful to the environment and society as a banking sector
- Make it easy for their customers to make sustainable living and investments their lifeline
- To play an active role in achieving the global sustainable development goals

Project was carried out as three workshops in Galle, Negambo and Embilipitiya. Nations Trust Bank was sponsored the programme in collaboration with National Cleaner Productions Centre Sri Lanka (NCPC), Environmental Foundation Limited (EFL), Biodiversity Sri Lanka (BSL) and Janathakshan GTE Ltd.

Undergraduates were able to do a survey to identify the obstacles that SMEs are facing when developing their businesses in an eco-friendly manner with the help of “Sustainability and CSR unit” of Nations Trust Bank. This programme advantaged the society by improving the awareness of the businessmen about sustainable business development while developing certain characters like critical thinking, problem solving and communication and leadership skills.



Service Learning Projects 2020

Due to the pandemic that prevailed in the country, the program took an alternative approach in converting the CSR projects into an online workable mode, where students can be involved in data analyzing, project conceptualization and promotion activities remotely. Amidst the challenging situation, 2020 Service Learning programme successfully executed through proper planning, effective adaptation, successful partnerships, and continuous monitoring.

RAIL SAFETY AWARENESS PROGRAMME - NOOR NAGAR TO ELUWANKULAMA

The project scope is scattered around Sinhala and Tamil communities in ten villages situated along the 42km railway track from Nur Nagar to Eluwankulama which is used by Insee Cement for gravel transportation. There are 26 railway crossings in the distance considered controlled by SLR (Sri Lanka Railways) and Siam City Cement Lanka Ltd - Insee. There has been a significant increase in the number of railway accidents during the past few years due to the increase in traffic, negligence of railway safety by public and absence of gatekeepers at the proper time to close gates. Therefore, this project expects to conduct a railway awareness program for the community to minimize railway accidents. A leaflet will be distributed among the public community about railway safety with the help of gramasewa officers in the areas. Gate operational data provided by the company will be analyzed. Issues of gatekeepers will be taken into consideration and a practical method will be proposed to monitor

them. In addition to that proposal of automatic alarm systems will be presented to the company.

All the meetings were held through zoom due to the pandemic. Unfortunately, there wasn't any chance for a team gathering or visiting the field for data gathering. All the analysis was done with the company given data. It has been very difficult to get an idea about the operational process of the company and the operational process of the gates without proper field visits.



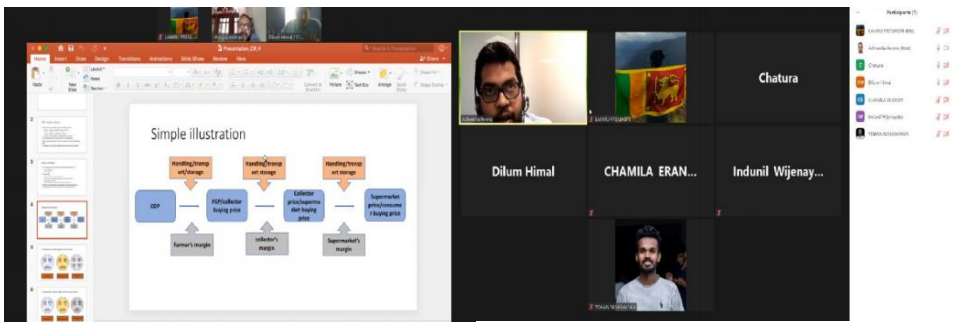
Template of the leaflet designed

CONTRIBUTION ANALYSIS – PINEAPPLE 2020

A contribution analysis and sensitivity analysis for several value chains of pineapple cultivation by the year 2020 will be conducted through this project. It is important for Nations Trust Bank to know the contribution of value chains. The findings of this study will provide insightful information for the areas of insurance, credit and technical knowledge to farmers and exporters.

Information is collected through pineapple farmers, supermarkets, exporters and collectors via phone calls.

There has been a bundle of challenges for this project. Initially, understanding of contribution and sensitivity analysis was very challenging. Further many people are reluctant to provide these sensitive financial data and specially in this pandemic situation contacting supermarkets and getting exporters data has been doubly challenging.



Zoom Sessions

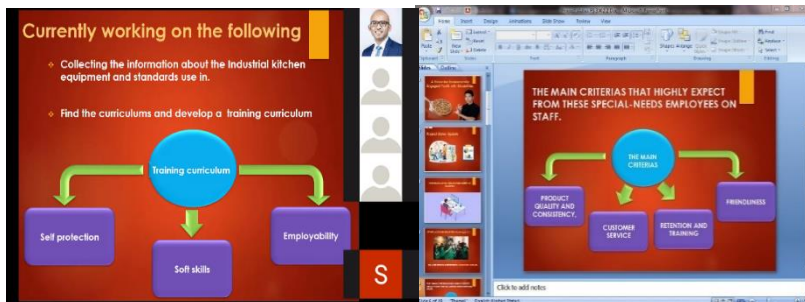
A VISION FOR ECONOMICALLY ENGAGED YOUTH WITH DISABILITIES

Pizza Hut (PH) Sri Lanka is partnered with Child Fund Sri Lanka and Department of Social Service (DoSS) to help Youth with disabilities (Ywd) aspire for a life of positive long-term engagement in skilled work and social inclusion. The Department of Social Service has several Vocational Training Centers (VTC) for youths with disabilities. The Amunukumbura VTC is one of them. The main objectives are to transform its kitchen to modern industrial standards, to revise existing curriculum for food technology courses. Information were collected on types of equipment and the use of the standards in the state of art

kitchens. Current curriculum was revised and adjusted to modern industry standards.

Simultaneously, individual surveys were done on similar projects conducted by fast-food chains in the USA and Europe. Findings were presented to the supervisors, via a Zoom session. A separate survey was conducted to find out the willingness of working among differently abled people and it received 83 responses.

Main challenge is not being able to physically access the Amunukumbura VTC because of the COVID-19 situation.



Presentation on the literature Survey

INTRODUCTION OF SMART CLASSROOMS FOR THE ENHANCEMENT OF DIGITALIZED EDUCATION SYSTEM IN GOVERNMENT SCHOOLS

The main aim of this project is to identify how schools use technology and to identify how teachers utilize technology in their teaching. Further, to train teachers who will be provided smart classrooms during this year on equipment and software use. Target group is teachers who teach A/L biology and physical science streams and O/L

English, Mathematics and Science subject of government schools in Sri Lanka.

Principals of the selected Schools were introduced to this process and through them the required information was obtained from teachers. Teachers who could not be reached at the school due to the prevailing situation were contacted through telephone calls and briefed on the project and information was sought from them and their views and suggestions were obtained. Information from 70 schools were obtained, and these data was analyzed. The teachers of the schools that received smart classrooms were trained for the use of the equipment via zoom sessions and the recordings were distributed as a DVD.

The main challenge of the project was the closure of schools in some areas due to the Covid -19 situation, making it difficult to obtain information from those areas. Further permission was not granted by some schools to visit even if they are open due to the prevailing situation. Also, some teachers were reluctant to share their information.



A smart Classroom